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Fee rise may bring first fall in university numbers since 1939

by Annabel Ferriman

University numbers may drop next year for the first time since 1939, if undisclosed predictions by the Department of Education and Science are correct.

It is understood that officials in the DES think the planned rise in undergraduate fees to £650 and postgraduate fees to £750 will result in 7,000 fewer university students in 1977-78 than in 1976-77, a drop of 2.5 per cent.

They expect the university population to be only 268,000 in 1977-78 compared to 275,000 this year, and a Government target of 285,000 before the fees were raised. This would mean that university numbers were 17,000 fewere than the target.

This predicted fall in numbers is apparently being used as one justification for the 4 per cent reduction in university resources next year, announced recently by Sir Frederick Dainton, chairman of the University Grants Committee.

If the same decrease occurred throughout higher education, there would be a fall in the numbers of full-time students to pre-1974 levels, from a predicted target of 523,000 to 492,000.

A hint of the department's thinking was given in the summer when Mr Mulley, then Secretary of State for Education and Science, announced the proposed increase in fees. He said: "We expect universities and other institutions to apply the new rates in full, and the savings achieved from them and from the associated reductions in numbers will be reflected in the grants to universities and in the Rate Support Grant at the appropriate times."

Informed sources in the universities, however, do not believe that such a drop is likely. They consider that the university population is still likely to rise next year to 279,000, which would be only 6,000 short of target. This is assuming that some students are deterred from entrance, but that very few drop out mid-course. They also deny that significant savings could be made even if the more gloomy DES forecasts turn out to be right.

There are four main categories of students who pay their own fees and so are "at risk".

● Home undergraduates who do not qualify for a grant, for example, those who have already done a first degree. There were about 11,000 last year, and the number is not likely to change substantially this year. They should not be confused with those on the minimum grant, who from next year will have their fees paid.

● Home postgraduates, who support themselves. They make up between one quarter and a third of the total and are likely to be about 10,000 this year.

● The last two categories are overseas undergraduates and postgraduates. The Committee of Vice-Chancellors and Principals estimates that this year those without a British Government grant will number about 11,000 and 14,000 respectively.

The grand total of those who might possibly be deterred by the fees rise therefore is 46,000 of whom about 16,800 entered this autumn.

When overseas student fees were last raised by more than £100 (from £70 to £250 in 1967), the number of overseas university students initially dropped sharply, but pre-1967 levels were quickly reached and passed. The numbers for 1966 to 1970 were 17,117, 15,497, 15,894, 16,770 and 18,252 respectively.

Undergraduate applications do not appear so far to have been affected. The total number of applications for October was 28,665 compared with 26,843 at the same time last year, an increase of 6.8 per cent.

Mr Ronald Kay, secretary of the Universities Central Council on Admissions, said, however, that any decline in interest by overseas students would not show yet, because they tended to apply late in the year. Information about fee increases would probably not have reached them yet and any deterrent effect they might have would probably show more in how many offers were taken up.

Individual universities are finding it hard to predict what exactly will happen, but are all adamant that any reduction in numbers will not produce any initial saving.

Mr Geoffrey Caston, registrar of Oxford University, said: "We find the effect o fthe proposed increase totally unpredictable. A third of our postgraduates are self-supporting, so there might be some change in numbers.

"If there were a drop, I do not see any great saving. There certainly would not be a saving proportional to the percentage decrease. There would be no saving on staff numbers nor on heating or lighting. The only saving would be in the scientific materials that students consume, but this would be totally insignificant."

Mr R. E. MacPherson, registrar of Cambridge University, said that the university was waiting to see what the fees were going to be before working out the likely effect on numbers. In the event of a drop he foresaw no initial saving whatever.

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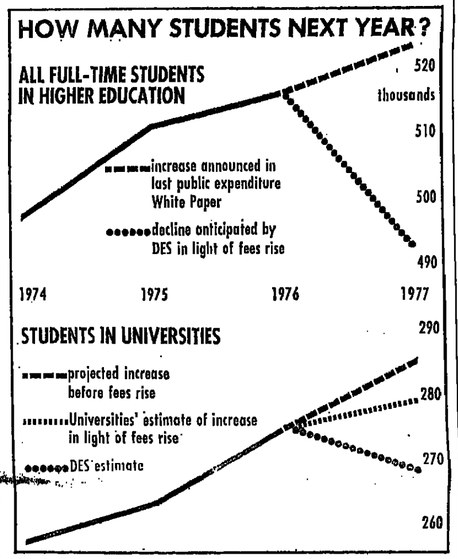

Polys could lose 3,000 students

The planned tuition fee increases in 1977-78 may cause a fall in polytechnic numbers in line with those predicted this week in the university sector.

The Committee of Directors of Polytechnics maintains that only a small minority of students will be affected but if the fee increases cause a 2.5 per cent drop in numbers in 1977-78, compared with this year as predicted in the universities by the Department of Education and Science, nearly 3,000 students could be lost to the polytechnics.

About 120,000 full-time and sandwich course students are currently estimated to be enrolled in polytechnics and this number could fall to 117,000 next autumn. The sectors likely to be worst hit, according to the CDP, are the overseas students, who form 10 per cent of the polytechnic population at present, and self-supporting post-graduates.

Dr Arthur Suddaby, chairman of the CDP, said this week: "Only a small minority of students will be affected by the proposed fee increases. Post-graduates who have not submitted their theses in the required time but decide to continue and support themselves will be in trouble."

He added that overseas student numbers might be reduced in 1977-78. Students from underdeveloped countries who were deserving cases might not be able to afford to study in Britain if the fees were introduced.

Dr Suddaby said some firm policy was now needed on the intake of overseas students. He condemned the control of numbers by fees.

Government to scrap adult council

by Sue Reid

The Government is planning to abandon the proposed national advisory council for adult and continuing education.

The decision follows a condemnation of the "think tank", first proposed in the 1973 Russell Report and due to be established early next year, by the Association of County Councils.

The ACC's education committee, responding to a key consultative document on the proposed council distributed to local authority associations in July, has told the DES that it is opposed to the idea.

After a meeting of the committee last month the DES was informed: "In the present financial circumstance a new national body should not be set up to fulfil a function which could be adequately discharged, with suitable modifications, by the National Institute of Adult Education."

The DES has not confirmed the decision which many in adult education believe has already been taken. A spokesman for the department told the *THES*: "More steps have to be taken before any decision on the advisory council can be made. We have only recently received the reactions from the various associations."

Mr Gerry Fowler, MP for Wrekin, gave a firm pledge that the council would be set up next year when he was Minister of State overseeing higher education. He told leaders of the NIAE in July that it would be established once detailed talks on the structure and purpose of the body were completed this autumn.

Mr Fowler, president of the Association for Recurrent Education, said that there were strong arguments for the council. "Morale in adult education is at an all time low and this has to be restored. We have long needed a body to coordinate, with advice, the existing activities carried out by a multiplicity of bodies", he said this week.

It was important to plan for the development of adult education in the long term but this did not imply that the new council would have been a vehicle to pressure for more spending power at the present time.

Mr Bill Hughes, president of the Workers' Educational Association and principal of Ruskin College, Oxford, said: "If the department now go back on their clear commitment to set up a national advisory council it will be a severe blow to morale."

He told the *THES* that the NIAE, as it was presently constituted, could not do the job that the advisory council was planned for. It could be linked to the Institute but needed freedom to innovate.

Oxford reviews its mixed colleges

Two more men's colleges at Oxford, Magdalen and St Edmund Hall, are considering going coeducational. All the other colleges are being asked for their views, as part of a university review of its five-year experiment which admitted women undergraduates to five men's colleges only.—*TES.*

16-plus exam delay

A final decision on the Schools Council's proposal for a common examination at 16-plus is to be delayed while there are further consultations, Mrs Williams, Secretary of State for Education and Science, said in a written reply in the House of Commons this week.

Among those to be consulted are employers, trade unions and those in further education.

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'Green Shield stamp' scramble for students

by Frances Gibb

The Government's proposals to increase tuition fees may cause a scramble for students and a consequent lowering of academic standards, Sir Brian Flowers, rector of the Imperial College of Science and Technology, warned last week.

In his annual commemoration day address he said that the problems caused by raising the total fee income so sharply that it became a significant proportion of a university's budget, with a consequent reduction in Government grant, would emerge starkly when student intake failed to materialize.

"Universities will need to exercise special determination that the financial pressures do not force a lowering of academic standards in a panic scramble for students", he said. "I hope we may avoid an era of promotional gimmicks whereby all who complete a registration form on the first day of session are offered 10-fold Green Shield stamps."

The Government had, however, solved one of the universities' problems by changing the accounting rules for halls of residence and refectories, he said.

The changes had given hope that the universities could extricate themselves from "the apparently endless circle of increased prices, loss of custom, enlarged deficits, and therefore further increased prices".

Sir Brian also noted with approval the Government's support for postgraduate education, expressed in the recent White Paper, and for the work of the research councils, whose responsibility for advanced courses it had decided to leave alone.

Imperial College was planning curricula changes which would bring in more multi-disciplinary courses, Sir Brian said. Together with University College, London, it had been designated a centre for major integrated multidisciplinary programmes of research into marine structures and materials.

One of these new courses was a BSc (engineering) degree course in technological and social science to be run in 1978. "Its aim is to produce a new kind of graduate who will combine a knowledge of scientific and engineering principles, the theoretical being provided in the first two years of the course, together with an understanding of the social sciences, the third year integrating the technical and social aspects of the subject matter."

This was an important innovation, Sir Brian said, because in future it will no longer be sufficient for a new industrial development to be *technically feasible*—"it will have to be *socially acceptable too*".

The college was also planning for multidisciplinary courses at postgraduate level, which included an MSc in technology and development and one in environmental technology.

Demand for science and engineering at the college was the highest for 10 years, he said. The undergraduate student intake was just over 1,000, the largest ever. Although in the past the college had been concerned about a decline in the basic *skills* of newly admitted students, the intellectual quality of these admissions had remained high.

The college was collaborating more with its European counterparts, he said. A visit by staff of the college to the *grandes ecoles* was planned, and visits to the Netherlands and Germany were also being considered.

"With a quarter of our students coming from over 90 foreign and commonwealth countries, it has to be accepted that we are already an international institution. But we need to strengthen still further our links with Europe."

Lecturers' pay delay

The Association of University Teachers has not yet agreed on lecturers' pay from this October because it is still negotiating with the Government over the injustices incurred in last year's salary settlement, Mr Laurie Sapper, general secretary of the AUT, said last week.

The union expects a meeting with Government representatives at the end of this month.

The whole issue had also been delayed because the Government had raised the question of increments in the public sector and the AUT had been obliged to show that incremental increases were not adding to the total salary bill, Mr Sapper said.

"We have demonstrated that far from increases, there is an incremental loss of 77 pence a head a year, possibly because of the large number of lecturers now arriving at the maximum point on the incremental scale", he said. These figures had now been accepted by the University Grants Committee and the Government.

The AUT has accepted however that the settlement from October 1 will have to be within the pay policy limits of 4½ per cent, with an overriding maximum of £4.

The Brighton and Hove Engineerium, which opened this week, will serve as an industrial training centre for student engineering apprentices from universities, polytechnics and industry. Sponsored by Christie's and sited at the original Goldstone Pumping Station built in 1886 to provide water for the Brighton district, the engineerium will offer six-week practical courses in engineering history and workshop practice. The station's first 100-year-old beam engine has been put in working order and the second will be restored by the first group of engineering apprentices to attend the engineerium in January.

Health students' aim is greater integration

by Marian Blakiley

Health students have reaffirmed their intention to work positively for greater cooperation and integration among the various professions within the National Health Service.

About 30 students representing most of the medical and paramedical professions, including occupational and speech therapy, medicine, nursing and physiotherapy, attended an educational meeting, which was organized by the National Union of Students in Manchester last weekend.

One of the sector's main concerns has been the fragmentation of patient care that results from the present divisions between the professions. This concern was reflected in the choice of topics for discussion.

The morning session was spent examining a case history from the point of view of every profession involved in the patient's care, to indicate how the different skills interrelate and the gaps that remain.

The resulting discussion led to a number of practical suggestions about how students could work at a local level for greater integration of health student training. They could improve communication with health students from the other professions; get involved in curriculum committees to press for the kind of development which has already taken place at the Middlesex Hospital, where nursing, physiotherapy and medical students join up for a geriatric course; and organize joint case conferences and teach-ins.

Paul Blomfield, a member of the NUS executive, outlined the union's long-term policy for health students' education, which includes pressing for a complete reorganization of training, and for the introduction of a UCCA-type clearing house for those health students not yet accorded such a service. NUS policy on these and related matters is to be put forward in detail in evidence to the Royal Commission on the National Health Service.

During the afternoon, discussion switched to fringe medicine with talks on homeopathy and osteopathy. Mr Brian Daubeny, a former BBC producer who now makes visual aids for the handicapped, spoke about the continuing lack of facilities for the deaf and hard of hearing.

Strathclyde centre to take a close look at communication

A centre for educational practice, a new teaching department designed to integrate the study and application of educational methods at university with practical aspects of educational technology, is to be set up at Strathclyde University next month.

It will incorporate and expand the work of the existing audio-visual unit and engage in teaching and research with emphasis on communication and teaching methods in higher education.

Mr Roderick Maclean, head of the new centre and formerly director of audio-visual services at Glasgow and Strathclyde Universities, hopes film and television and related facilities will be closely linked with the academic work of the centre. He also believes educational technology should be related more productively to the university's teaching requirements.

The study of communication includes a study of the media although the university intends this subject to be separate. The centre will offer first degrees in communication. Postgraduates will study the subject on part-time and full-time courses in areas of considerable social and economic importance such as industrial training.

The centre will also organize, coordinate and develop in-service training courses. This will involve the examination and encouragement of new teaching approaches and consultancy services to both staff and students.

Its academic staff of three includes Mr Alex Main, who for the last three years has been seconded to the committee of vice-chancellors and principals as coordinating and research officer for the training of university teachers. He will advise on educational methods.

New pledge on in-service training

by Judith Judd

The Government's support for the expansion of in-service training for teachers was reaffirmed last week by Mr Gordon Oakes, Minister of State for Education.

Mr Oakes, who was speaking at a conference on in-service training organized by the National Union of Teachers and the National Association of Teachers in Further and Higher Education.

The Government is committed to start expanding the number of teachers in in-service training from the present 1,000 a year to 10,000 a year. The cost could be as much as £50m a year, though the programme which is scheduled to last ten years.

Mr Alan Evans, senior official of the NUT education department, said earlier this week: "By the end of the 1980s you will have an upsurge in teaching profession because for the first time only 20,000 a year will be coming into teaching."

As a result, numbers training would be vital to have enough teachers up-to-date, to train a teacher in areas that had not been teaching before. It is the only way the figure would be cut in half.

The conference, taking place yesterday and today, is being attended by representatives from most of the local authorities in England and Wales.

Mr Bill Boaden, Assistant Secretary (Education) of NATFHE, said the aim of the conference was to draw attention to the Government's political commitment to teacher training. "Evidence has been available in the past that we are not doing enough and authorities are cutting at this area as one of the easily chopped", he said.

In fields such as chemistry, electrical engineering, technical change was so fast that the extra training teachers would be able to keep up with developments.

£250,000 appeal by Newcastle

Newcastle University has launched an appeal to raise £250,000 for teaching and research in biomedical engineering.

The project, announced last week by Professor John Walton, dean of medicine, will be sponsored by a university development trust set up in the past has raised over £1m. It will be run by Mr Cecil Clothier, past chairman of the Institute of Directors (northern area branch) who will head a steering party of businessmen and will raise the money. He will be assisted by Professor Leonard Mansfield, dean of applied sciences.

Biomedical engineering, an activity involving close cooperation between doctors and engineers, has led to the design of machines such as head and body scanners, for imagery systems, artificial joints, plants, artificial kidneys and so on "spare parts" for the human body.

Esso bursaries for five students

Bursaries initially worth £400 a year have been awarded by Esso Petroleum Co Ltd and Esso Chemical Ltd to five students beginning courses in chemical engineering at British universities.

The bursaries were awarded on the basis of essays submitted in response to a scheme announced by the two companies in March. The scheme is part of an effort to increase interest in chemical engineering.

Programming in to universities

The Computer Board has set up a two-year research programme to investigate the possibility of establishing a network of computer facilities for use by universities and research council institutes.

The research programme will be conducted from the Science Research Council's Rutherford Laboratories by a three-man team. The decision to set up the programme resulted from a report presented to the Computer Board by Professor Mike Wells, of Leeds University.

SRC budget faces cut of nearly a quarter

by David Dickson

The reduction in the Science Research Council's budget over the next few years is likely to be even higher than suggested in the council's annual report published last week, falling by almost one quarter—rather than one sixth—between 1973 and 1980.

In its annual report for 1975-76, the council says that it expects its funds to decline by about 2 per cent a year. It suggests various economy measures—such as reduction of expenditure on nuclear physics facilities—through which this could be accommodated.

Following the recent announcement of further cutbacks in public expenditure, however, it seems likely that the required annual rate of decrease in the council's budget will be between 2.7 per cent and 3.3 per cent a year, reducing the expected size of the budget for 1981-82 from £105.3m to as low as £98.9m.

Even at the former level the council has raised doubts about its ability to maintain scientific research in universities and polytechnics adequately. The new estimates can only exacerbate this situation.

Although the allocation of the science budget for 1977-78 has not yet been made, it seems likely that the SRC's share will be £112.5m at 1976 prices, a reduction of about 5 per cent on the budget for the current year.

The council is still hoping that the Treasury will reverse its decision only to cover part of the increased cost of subscriptions to international scientific bodies resulting from the fall in value of the pound.

But it fears that if only partial supplementation is allowed this would raise major policy questions, such as the extent to which it could continue to participate in the European Organization for Nuclear Research and other international organizations.

● The Science Research Council will make no more grants until the dispute with the Government over its "cash-limits" policy is settled.

An announcement about grants would normally be made in November or December but the council is worried by the effect of the fall in the pound on the international subscriptions, which account for about 30 per cent of its annual budget.

It is trying to persuade the Government to change its policy of no longer automatically meeting increased costs of public bodies.

Grants for the council's rolling programmes will be announced in the normal way. But holders will be asked to defer filling vacant posts and to avoid commitments for captial expenditure where this can be done without damaging the work.

Sir Sam Edwards, council chairman, said that unless negotiations with the Government were successful the council would be several million pounds in the red. The council has already announced plans to save £3m.

'Competition not the way to conserve resources'

Britain's higher education system should be planned on a collaborative basis not a competitive one, to ensure a rational use of resources, Mr Gerry Fowler, former Minister of State overseeing higher education, has warned.

Speaking in Trent Polytechnic last weekend Mr Fowler called for a review of local authority involvement in the management and financing of poytechnics, and said this should include an examination of new course provision.

He added: "The time has come when we must all think hard about what is the ideal method of combining local authority involvement in the management and financing of polytechnics, with the national interest that their work inescapably evokes. We must think too of what mode of funding can best ensure that management and financial responsibility lie in the same hands and can give to the institutions themselves the greatest incentive to efficiently use the resources at their disposal."

This review had to deal with the problem of ensuring that there was some coordination of provision throughout higher education, especially course provision.

A great deal of staff time and effort in polytechnics was devoted to the development of new courses and in securing approval for them from the CNAA. Many of those still recruited badly in spite of their design to meet a genuine need.

"This is often because other institutions, not least in the polytechnic sector, have seen the same need at the same time, and have also designed a course to meet it", Mr Fowler said.

"We must now ensure that there is a regular interchange of planning information at both regional and national level. We shall only secure a rational use of resources in the development of our higher education system if we plan it on a collaborative rather than a competitive system."

Commenting on the concept of differential grants for engineering and science students, Mr Fowler said: "Some argue that there should be an additional grant from public funds, of say £300 per annum over and above the present award. Others suggest that science and engineering students alone should receive a full award while other students receive a lesser sum, or in the case of not conspicuously 'useful' disciplines students should pay the whole cost of their education."

Mr Fowler condemned all these suggestions. The problem of recruiting science and engineering students lay less within higher education than in the school system or in subsequent employment. Industry itself had to ensure that qualified engineers were more suitably rewarded and had a better career structure.

He said that higher education should avoid making the recruitment to certain types of engineering courses more difficult and as far as the proportion of women engineers was concerned, Britain was at the bottom of the "league table".

Polytechnics could make a very specific contribution to meeting the needs of the economy through the development of post-experience courses. Their value was that they could be made to relate specifically to the needs of the pupils.

"This was the only way, Mr Fowler said, to meet through the education and training system the constantly changing needs of the economy for highly qualified manpower. Polytechnics and other institutions capable of mounting such courses had to be "industry watchers", ever-sensitive to the demands placed upon them.

Industry and college link call

The Department of Industry should take over responsibility for about 12 universities and polytechnics so that teaching and research could be more closely linked to economic development, Professor Kenneth Alexander, chairman of the Highlands and Islands Development Board, said last week.

In a speech delivered in Edinburgh at a degree congregation of the Council for National Academic Awards, Professor Alexander said that without such experiments it was possible that academic freedom would come under increasing pressure from demands for greater relevance.

He would prefer to see willing volunteers attracted by the excitement and promise of such a new approach in industry linked institutions rather than reluctant students tempted into engineering by an extra grant of £300 per session, as had been proposed.

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Plaid Cymru plan new Welsh university

by Tony Heath

A new University of Wales should be created by drawing together the existing Welsh institutions of higher education. This is proposed by Plaid Cymru, the Welsh Nationalist Party, in a lengthy policy statement presented last week at the party's annual conference in Aberystwyth.

The statement is the party's most detailed pronouncement to date of its educational aims. It was introduced by Plaid Cymru's education spokesman, Mr Hywel Roberts, head of business studies at the North East Wales Institute of Higher Education.

The policy envisages the end of "the divisive binary system" and the vesting of control of all higher education in Wales in a proposed Higher Education Commission. This body would take over the higher education planning functions of the Court of the University of Wales and the Welsh Joint Education Committee.

"This commission would be responsible to the Secretary of State for Education in a Welsh government when such a government is established", the policy document states. "In the interim period it is essential that this commission is established as soon as possible and made responsible to the elected Welsh Assembly."

The new University of Wales would be created from the existing University colleges (at Cardiff, Swansea, Aberystwyth, Bangor and Lampeter), with the Polytechnic of Wales, the newly formed institutes and colleges of higher education, and the remaining independent colleges of education becoming constituent colleges.

It is proposed that the new colleges would develop some degree courses. But they would "continue to serve their communities by providing a range of non-degree courses on a full-time, part-time and short-course basis."

One important task envisaged for the future Higher Education Commission would be the strengthening of the federal structure of the new university. The elimination of wasteful duplication of resources would also be tackled by the commission.

"In each discipline one or two colleges would be designated as centres of excellence and the corresponding departments would be of a minimum size to provide an honours and postgraduate school with teaching at the highest standard". Research programmes "of major importance" would be undertaken at the designated establishments.

Plaid Cymru's strategy makes possible the establishment of a Welsh-medium college teaching entirely through the Welsh language. It is thought that if this college was sited near one of the existing university colleges, contact between Welsh-speaking undergraduates and staff and overseas students would be enhanced.

The Welsh-medium college would not preclude the establishment of Welsh courses in other colleges. On the contrary, Plaid Cymru envisages the college acting as a resources centre to produce material to help those teaching through the Welsh language at other colleges.

Assuming that the new university will validate all diploma and certificate courses in Wales it would be possible, Plaid Cymru say, to ensure a degree of comparability between existing HNDs, the new TEC and BEC diplomas, and the DipHE. This would enable students to transfer between the various colleges of the new university.

The composition of the projected Higher Education Commission merits less than 100 words in the policy statement. The suggestion is that it "will consist of representatives from the colleges of the new university, representatives from industry and commerce and the trade union movement in Wales, and representatives of the Welsh local education authorities.

Society today

A new magazine, *Society Today*, is being published for students and teachers in colleges of further education and schools. A bi-monthly offshoot of *New Society*, it is intended to be relevant to examination syllabuses in the social sciences.

UN university launched with Britain's 'moral support'

by David Walker

The new United Nations University was launched in London this week with an appeal for $500m. But all the British Government could offer was "moral support".

Mr Prentice, Minister for Overseas Development, told a conference at the Royal Society that the university was unfortunate to have been born in 1973, at the start of the world recession. None the less, it was welcome.

Dr James Hester, rector of the university, which has its headquarters in Tokyo and so far has been largely funded by the Japanese, emphasized that the university's charter guaranteed its academic autonomy and said the $500m endowment fund would cushion it from political interference. The university planned to live off the $40m a year interest it might get from such a sum.

Under a council appointed by the general secretary of the United Nations and the director-general of Unesco, the rector was free to appoint staff, Dr Hester said. The university's main programme of research into world hunger, had been chosen independently with the aid of a worldwide network of academic advisers which he wanted to continue to build up.

This emphasis on working through established universities and research institutes was welcomed by Mr Prentice, who used the occasion to describe recent changes in the policy of British overseas educational aid. He said Britain was moving away from giving large-scale grants towards the establishment of new universities abroad; instead aid was being directed towards university departments concentrating on development work.

"We would agree with the decisions of the council of the UN University on its priorities and its plans to give preference to setting up 'associate' relationships with existing educational institutions rather than starting new institutions.

"As part of our general aid strategy of helping the poor, we are trying to give increasing consideration to the question of who benefits and who pays for the education to which the United Kingdom contributes in developing countries. Some of the institutions overseas may draw their students from too narrow an income bracket to justify support from the aid programme. We are, nevertheless, very anxious to continue to play our part in building up the 'know-how' needed for the development of the Third World", he said.

Dr Hester, a former president of New York University, said the aims of the UNU were threefold. It was a non-political means of identifying the problems of development and finding the means to solve them through techniques natural to scholars; it was a way of concentrating applied knowledge, especially on Third World concerns; and not least, it was in ideal form an international community of scholars.

He accepted that in the present economic circumstances Britain could not offer money to the university. What he hoped for were intellectual contacts, expertise, schemes of fellowship, and associations.

But unless all the British academics at the conference were immediately convinced. Dr Alwyn Williams, vice-chancellor of Glasgow University, wondered if the title of university was accurate, and suggested the UNU was more an institute of applied knowledge.

In reply Dr Alexander Kwapong, former vice-chancellor of the University of Ghana, who now serves as the vice-rector of UNU, said the original idea of a campus university had given way to a more flexible organization based on programmes administered from Tokyo but carried out in, for instance, the Institute of Nutrition of Central America and Panama in Guatemala, or the Central Food Technological Research Institute in Mysore, India.

'Give them the skills'

Universities and colleges should help improve the performance of industry and commerce by producing more students equipped with the relevant skills and experience, Mr Donald Hutchings, principal of Loughborough Technical College, has said.

Speaking to the East Midlands Society for Commercial and Industrial Studies, Mr Hutchings said that universities and colleges are at last "waking up" to the harsh financial implications of the cutback in education spending. They are having to examine their priorities with unaccustomed ruthlessness and develop closer links with industry and commerce.

They now face two urgent tasks. First to help improve industry and commerce by producing suitably skilled students, and secondly to develop in students a fuller understanding of the need and value of industry and commerce in society.

Mrs Williams considers higher science grants

by Judith Judd

Higher grants for students studying science and engineering are being considered by the Government, Mrs Shirley Williams, Education Secretary, said.

But this was only one of the proposals being considered to encourage young people to take up subjects which are at present undersubscribed.

Mrs Williams was speaking at the opening of a new building at Rockingham College of Further Education, near Rotherham.

She called for regional consultations during the next four months between teachers, industrialists and representatives of further and higher education to consider how to further the present debate on the curriculum and basic skills.

The department's proposals would be discussed before any action was taken, Mrs Williams said. It was untrue that the department was seeking national control of the curriculum.

"Among the splendours of the English system are its flexibility, its imagination and the freedom of the teacher in the classroom. No one wishes to jeopardize that."

On the question of examinations she said in the past too much store might have been set by them.

"But we must avoid moving too far in the other direction so that lack of rigour removes the incentives for young people and destroys the value of examination results for employers and colleges and universities."

On the proposals for a common system of examinations for 16-year-olds Mrs Williams said she could see the attractions of such a system when so many fifth forms had to mount courses for both GCE and CSE examinations at considerable costs in terms of effort and resources.

"On the other hand, the value of *any examination depends upon its wide acceptance and recognition." Such changes could not be rushed* but there was no question of the Government simply shelving the Schools Council recommendations.

She said whether or not standards were being maintained the requirements were rising.

'Don't cut PGCE numbers'

The suggestion that the number of postgraduate students receiving initial teacher training in universities might be cut should be strongly resisted, Dr William Tayler, director of London University's Institute of Education, said.

Speaking at a presentation ceremony at the College of Preceptors, he said the closing of any university departments of education would curtail the possibilities of teachers in many areas pursuing part-time advanced studies in a university.

"They would still further reduce the bases available for the already very small volume of educational research and inquiry financed by the DES, the schools council and independent foundations."

Given the new fee structure proposed by the Government, any reduction in the number of initial training students, most of whom had mandatory grants, might have serious consequences for the fee income of universities.

"Such a reduction would seem particularly futile at a time when there is evidence that schools and local authorities welcome university-trained graduates."

The employment prospects of university-trained graduates had continued to be good despite the reduction of the number of teachers required.

There was no guarantee that graduates who might be denied a place in a university department or institute of education would be satisfied to train in a college or polytechnic.

Campaign may benefit historians

A question has been tabled in the Commons as part of a campaign to force the Church Commissioners to abandon all fees for looking at parish registers.

Mr Phillip Whitehead, Labour MP for Derby North, who will ask the question has responded to appeals from the Society for Local Population Studies and other research organizations.

The campaigners hope to persuade MPs to vote against the commissioners' order which, increases fees for a number of parish services and retains those for looking at registers.

Research organizations argue that parish registers are public documents and the public should not be charged to look at them. Between *20 and 30 per cent of registers are still in parish hands.*

Mr Christopher Charlton of the Society for Local Population Studies, said: "It is monstrous that people are receiving money simply by virtue of their custody of certain records. The registers are paid for and legally owned by the parish."

Historical researchers, consulting parish registers, can be charged £45 for every century of registers tion examined and about £180 for an investigation covering the period from the mid-16th to the mid-20th century.

In practice the clergy rarely charge the fees but the campaigners are concerned that the commissioners have rejected the arguments for abolition and clearly intend them to be collected.

A spokesman for the commissioners said a proposal would go before the General Synod next month for the compulsory deposit of a number of parish registers in diocesan record offices. The proposal would mean that unless a parish met stringent conditions, its registers would be taken away.

If the Synod agrees, a measure embodying the proposal could go before Parliament next year. The commissioners were also considering charging search fees based on the length of time spent studying registers.

Mr Charlton said people who had custody of parish registers at the moment would go to great lengths to keep them. If the intention was to have the registers transferred to public records offices, why were new ways of charging fees being discussed?

Oxford closed scholarships 'serve no academic purpose'

by Frances Gibb

Oxford University should abolish its entrance examination, scholarships and exhibitions and award places on the basis of A levels or reports and interviews, the Oxford student branch of the Communist Party has proposed.

In a booklet entitled "Privilege and Ideology: action against reaction in Oxford University", the students say that Oxford is ceasing to attract the cream of Britain's school leavers.

Its applications have declined over the past 10 years despite the increased numbers of school leavers going into higher education. It is also the case that the university's intake contains even less state school pupils than the national average.

This has serious implications for the university's ability to staff the professions; it has always been important for a few working-class children to be able to fight their way through the grammar schools on into the Civil Service and the BBC, it says.

The present entrance system discriminates against applicants from state schools by often requiring different A level standards, for which few state schools can provide the teaching.

Exhibitions and closed scholarships, says the booklet, "serve no academic or philanthropic purpose, and survive to suggest an inner elite, designated by longer [illegible] larger rooms".

The booklet outlines a [illegible] for change. This includes reorganizing the 10 smallest colleges, [illegible] only about 100 undergraduates, [illegible] that each discipline is concentrated [illegible] a smaller number of colleges; [illegible] also proposes restricting the purchases of college libraries to [illegible] textbooks and leaving the [illegible] libraries to stock specialist [illegible].

Abolition of the scout system which "survives as one way [illegible] making students feel part of a [illegible] bourgeoisie" must be demanded, [illegible] says. The colleges could also employ staff to clean rooms.

Colleges should share the [illegible] grounds, and remaining university grounds should be sold to the city council. Students should control sports spending and there should be more matches with students from local colleges and townspeople.

Modernizing the university would destroy it as a [illegible] ruling class and improve conditions for students and non-academic staff, the booklet says.

But it adds: "This does not mean that Oxford University should be just like any other university. We do not criticize the tutorial system, library, scientific [illegible] but rather the way they are employed and used—we are concerned with style rather than substance."

The booklet is to be discussed at an informal meeting at Balliol College next Thursday.

This portrait of Dr Henry Miller, its late vice-chancellor, has been presented to Newcastle University by John T. Y. Gilroy, the artist.

Planned engineering course rejig meets opposition

Proposals to remodel the degree course in engineering science at Oxford are being opposed by 128 dons. They will be debated in Congregation on November 16, and it is expected that a postal vote will eventually be called for.

The dons have signed a resolution calling on Hebdomadal Council—the university's inner cabinet—to annul the decree and so give effect to what has been described as a fundamental reshaping of the course.

Hebdomadal Council put forward the decree on behalf of the physical sciences board saying that a major departure from the existing structure of final honour schools should be left to Congregation to decide. There were no recommendations from the council or the general board of the faculties.

Reshaping the course would mean that in place of a first-year examination and a final honours school at the end of the three-year course, the physical sciences board would introduce a preliminary examination after two terms, and the division of the final honours examination into two parts.

One would be taken at the end of the second year and the second at the end of the third year. The examination for the final honours school of engineering and economics would also be divided.

Among the 128 dons, representing almost all disciplines, opposing the changes, are eight engineering dons. They include Professor H. Motz and Professor W. S. Hemp.

Opposition is likely to be led by another engineer, Dr R. N. Franklin, former vice-chairman of the general board of the faculties.

Three heads of colleges are among the signatories to the resolution: Miss Rachel Trickett, principal of St Hilda's College; Dr James Griffiths, president of Magdalen College, and Dr J. N. D. Kelly, principal of St Edmund Hall.

Singapore student pleads for asylum

Tan Wah Piow, former president of Singapore University's students' union, is in Britain seeking political asylum after escaping from Singapore where he had been in prison for eight months.

When released he was threatened with national service but managed to escape. He has now been put on the "arrest on sight" list by the Singapore authorities.

Mr Christopher Price, MP for Lewisham, who is supporting Tan's application, said it was the first from someone trying to leave a Commonwealth country.

Numeracy course for technicians

The National Extension College and Yorkshire Television are to launch a multi-media adult numeracy course next autumn. It will aid craft and technicians students in colleges but will also be aimed at home-based students.

The course will respond to research completed by Mrs Ruth Rees, of Brunel University, which shows that craft and technician students not only have great difficulties with numeracy.

A series of television programmes will be produced by Yorkshire Television and these will be accompanied by a set of printed course materials from the NEC.

Language test for newcomers

Essex University is for the [illegible] time requiring that all of its new overseas students whose language is not English must [illegible] English language test.

The test, which is diagnostic, [illegible] be the basis on which advice [illegible] given to the student on ways of improving his English and learning skills. He may, for example, [illegible] the courses run by the university unit teaching English as a [illegible] language.

Mr Graham Chandler, the [illegible] trar, emphasized that no [illegible] would not be allowed to continue with his course on the basis of performance in the test.

"But if a student does not [illegible] the test, or having taken it refuses to take advice, then the examination board will know this and could take it into account when looking at examination papers", he said.

The university has given [illegible] help with English before, but this is the first time that it has [illegible] test on a more formal basis.

American visit for six poets

Loughborough University's Arts Council poetry fellow, Mr Peter Morgan, is one of six poets taking part in a visit to the United States as part of the bicentennarial celebrations.

The trip, sponsored by the Arts Council in cooperation with the Academy of American Poets, lasts three weeks ending on November 1 and takes the poets through eight [illegible] states. Mr Morgan [illegible] post of poetry fellow for one year.

Edinburgh University has appointed Mr. Robert Nye, [illegible] novelist and critic, as writer in residence for the year 1976-77 [illegible] funds from the Scottish Arts Council and the university's faculty of arts.

Mr Nye's collections of poetry include *Darker Ends* (1968) and *Divisions on a Ground* (1976). His published novels are *Doubles* and *Falstaff*. He is a poetry critic [illegible] *The Times*.

UCL scholarship appeal

University College London has launched an appeal to raise £5,000 for its fourth South African Scholarship. Lord Annan, provost of the college, is patron of the appeal. Announcing the appeal recently in London he said the college had a tradition of opposition to discrimination and racism in all spheres of life.

The appeal committee hopes to raise a sufficient proportion of the target to enable the student selected to begin studies in October, 1977.

Don's diary

Monday

The beginning of method day and the fourth week of our term—the first for some other university departments. To my mind "method" means practice, so twice a week I take my tutor group of history graduates to Hartcliffe School, a large (2,200) comprehensive school 12 miles away in Bristol. Ten minutes' walk through Bath to the minibus makes me regret, as usual, the fact that the university is not in the city but perched on one of the seven hills surrounding it.

Pleasant drive through country for the most part until we reach Hartcliffe, a post-war overspill council estate, to be confronted with the appalling sight of the prize-winning Wills cigarette factory. This low, sprawling, black, windowless and apparently lifeless, dominates the estate. It is visible from the school and provides for many of the pupils a constant reminder of how their next 40 or 50 years will be spent.

In spite of its problems Hartcliffe is an enlightened school and the enthusiasm and cooperation of its teachers make possible, on a small scale, the kind of school-based work I would like to see become the overall pattern of graduate teacher training. On Monday mornings students, teachers and myself work together with first-year children on the Keele Integrated studies course. We plan the lessons, team teach and evaluate what has gone on in the classroom.

Students begin to see for themselves, through personal experience, the real problems, as well as the possible solutions that exist in a comprehensive school and, with guidance, they begin to make that vital link between theory and practice which so many students complain is lacking in PGCE courses. School-based work seems to go some way towards answering that fundamental criticism: we have teaching hospitals, why not teaching schools? [illegible] from this morning's session, albeit reluctantly in one or two cases. Instead of imparting historical facts they have tried to teach 11-year-olds in mixed ability classes the meaning and use of symbols. Making masks, acting out feelings and discussing meanings is a far cry from dictated notes.

I also receive a salutary lesson. Intending to help out in the absence of a teacher, I offer to take a class of 11-year-old "remedial" children for mathematics. Faced with the real situation—16 children with reading ages from six to nine years and IQs well below average—I regress fast. I decide to start off with a mental arithmetic test, but when I announce this the children take it as an insult. In fact, these children were friendly, eager to learn and succeed. The failure was mine, for although I am a qualified teacher, and indeed a university lecturer, I cannot explain simple addition based on carrying units to the 10.

More "method" in the afternoon—we are timetabled for three hours. The session is to be strictly practical, since students are unleashed on teaching practice in under two weeks. Do I really believe that practice in teaching "the medieval village" within the safe confines of the history department at the university will prevent students from being carved up by disaffected teenagers?

Nevertheless, students present lessons they have prepared, argue the validity of the content and simulate "a short period of teaching. Ideally, children should be involved in this exercise—if not in school then brought into the department and the lesson played back on television cameras—but I feel that at this stage students are not yet ready to have their frailties so harshly exposed.

At the end of the session (5.30) I return to my office at the other side of the campus where the school of education is housed in a sort of mausoleum at the top of the building, which supports several, as yet unidentified, rectangular concrete slabs and a few pot plants. Why do modern universities have to look like shopping precincts? Have a thought provoking conversation with a colleague about the political realities of life and leave at 6.45 pm. A gruelling start to the week.

Tuesday

No class until 11.15 so do some "administration". Without knowing quite what this activity is or how it is assessed, successful performance in it is known to be crucial to a lecturers' promotion prospects and getting through probation and the efficiency bar. The application of these academic checks and controls will increasing, if unequal, severity is the cause of much dissension and personal unhappiness among staff.

At 11.15 I take a class of students, from a variety of disciplines, who wish to teach history as a subsidiary subject. I am not too keen on this as I think we should be preparing students for an integrated curriculum though I know that in most schools at present, single subject teaching is the order of the day.

Regret that the university is not the centre of Bath

The afternoon (2.15-5.15) is devoted to curriculum studies. This year we have adopted a team teaching approach and this afternoon the local lecture is on "evaluation". Considerable doubt and confusion reigns among the staff working group, to which I belong, as to whether mass lectures are useful, and if so to what level and should they be compulsory? Do students in the first few weeks of graduate training with little school experience get anything useful from theoretical lectures, particularly in so arcane an area as curriculum studies?

We all agree that four lectures is inadequate and makes the selection of "essential knowledge" a near impossibility. At 5.30 we are discussing these problems with some urgency but reach no conclusion except to raise the whole issue of content in the PGCE course at a meeting at some future date when we have more time.

Wednesday

Prepare for my 11.15 lecture on the history of teacher training from 1800 to the present day. This is a mass lecture addressing 150 (optium number) in a tiered lecture hall. Although quite appropriate when expounding on Samuel Wilderspin's infant galleries or the monitorial system, I wonder whether the mass lecture is the most educative for present day students.

Nevertheless, I enjoy giving these lectures and today I feel that the subject is "relevant" even to those philistine students who complain that history of education is a waste of time. Whatever the changes in the PGCE course, and surely there must be radical ones soon, I would argue the case for some history of education if only on the grounds that it offers some common sense perspectives that students can grasp while drowning in a sea of educational theory.

Later in the afternoon I have an appointment with an ex-headmistress, currently head of upper school in the comprehensive created out of her old secondary modern. Why are there so few women heads of mixed comprehensive schools? Why, for that matter, are there so few women in departments of education and even fewer professors and heads of school? The purpose of the meeting is, not, however, to make these predictable, feminist points, but to review the progress of an M.Ed thesis on the history of secondary education since 1900 within a particular authority. We discuss the more interesting question of how much "inside information" can be included in an academic thesis without provoking a libel action.

At 5 pm I attend a formal meeting of associate tutors of the university school of education. These are local teachers who, at our request, take on the task of advising, guiding and assessing a student on a teaching practice. Since we share responsibility for our students we had hoped to involve them more closely in formulating a new policy on teaching practice. But the discussion gets bogged down in administrative minutiae; a disappointing meeting ending at 7.15.

Thursday

The second session at Hartcliffe. The whole morning is spent in the fourth year history workshop which was reported in last year's *TES* history supplement. Each student is made responsible for a group of about 15 boys and girls and undertakes to help the pupils select and work on a research project which will eventually form part of course work submitted for GCE or CSE.

The students have to discover through trial and error that fine line between helping pupils to learn and "instructing" them. They soon learn to make this distinction since adolescent pupils have ways of showing resentment towards domineering and intrusive students all too clearly. Students help the pupils plan their work strategies, find and use resource material and, when appropriate, take them out of school.

Students are also expected to make clear to the pupils the difference between primary and secondary evidence and to prompt questions that will bring about some critical insights into the nature of history. This last aim is particularly difficult to achieve, largely, I feel, because the students in their degree courses have not been encouraged to ask fundamental questions about their subject.

The morning goes well; the workshop is excellently organized and well equipped and the teachers are concerned that the students, as well as the pupils, learn from the experience. One or two students find it hard to relate to adolescent pupils for such an extended period. But I think the exercise is particularly useful for the students because they gain confidence in handling pupils of this age before confronting them in classes of 30 on teaching practice.

Another time-tabled session (three hours) on method in the afternoon. Explain and describe the resources available for teaching history and while making a strong plea for the use of visual material, models and artefacts I am aware that in some schools the textbook is what really matters. Is this another example of the gap between theory and practice?

One of last year's students puts in an appearance. He has opted out of the system by setting up his own "free school" in Bath. It forms part of a community centre which has just received £9,000 from the Government's job creation programme.

Interestingly, although the centre caters largely for the West Indian community in Bath the school, in fact a truant school, has nine white pupils.

Friday

Since my MEd class does not begin until January I have a free day. I spend it doing correspondence, writing references and preparing next week's lecture on what seems to be "all I know about the curriculum!" I should be using the day for research and writing since education lecturers have to conform to the criteria laid down for the university academic staff and show evidence of research. We are, after all, dons though this version of a Don's diary may read more like a teacher's timetable.

Mary Tasker

The author is a lecturer in the Bath University School of Education.

Grants snub claim by correspondence colleges

by Sue Reid

The Department of Education and Science has been strongly criticized for ignoring the role of Britain's correspondence colleges. It fails to tell students of correspondence learning routes and does not fully inform local education authorities of their grant-awarding powers, according to a report published last week.

Prepared by the Association of British Correspondence Colleges, the report is based on a survey of 62 l.e.a.s in England and Wales. It reveals that in 1974-75 they supported 493 correspondence students, outside the Open University, at a total cost of only £17,000.

It also shows that of the 116 English and Welsh education authorities at least 12, including the Inner London Education Authority, Tameside and Harrow, do not give any awards to correspondence students as a matter of policy. Liverpool, Cheshire and Dorset are among authorities who only give grants in exceptional cases to handicapped students.

The report says that the money awarded in 1974-75 was the equivalent of financing 11 polytechnic students on full-time courses. It adds: "There is a very uneven distribution of grants throughout the country and, therefore, the chances of obtaining financial support totally depends on the attitude of a particular education authority towards grant-giving in the correspondence fields."

Disparity between the attitudes of l.e.a.s is harmful to education provision, according to the ABCC. The department should consider its duty and inform the authorities of their powers to award grants under the 1962 Education Act, it says.

Derbyshire l.e.a. spent more than £3,500 on financing 65 correspondence students in 1974-75 while other authorities, including Dudley, Salford, St Helens, Warwickshire, and Bromley, received no applications.

The ABCC is now urging the DES to present a true picture of provision by collecting statistics on the number of correspondence students.

The report says: "We know that in the United Kingdom alone more than 250,000 students study by correspondence but there will be no mention of them in the HMSO publications which aim to present a survey of UK education."

Mr Michael Newell, chairman of ABCC, launching the report this week, said that the correspondence colleges had suffered from time to time by losing students to the Open University. But the fall in numbers had halted and was now steady.

Outlining the cost-effectiveness of correspondence learning at a time of financial stringency he said the price of courses ranged from about £20 for a GCE O-level programme, to £180 for a three-year degree course.

Welfare rise 'saps will'

The growth of the social services has sapped the will of individuals to follow their own consciences, Mr Jo Grimond, the former Liberal leader, said at Heriot-Watt University last week. His lecture on "Social Conscience in Britain 1952-77" was the first in a series to mark the Queen's Silver Jubilee.

Today's Samaritan would pass by on the other side of the road from a wounded man because he would argue that it was a case for the Director of Maladjusted Cases, Mr Grimond said. "As the director would almost certainly have been attending a conference on the question of socially deprived Samaritans suffering from non-integration, no help would have been forthcoming."

The social services had a debit as well as a credit side. They had also failed to develop preventatives. They only began to operate when people were already in trouble.

Social work must be extended from individual cases to work to prevent those cases arising.

'Soft options only' jibe

The expansion of further and higher education has left many students fit only for the "soft options" in life, a leading Scottish industrialist said last week.

Sir William Lithgow, director of the Clydeside shipbuilding firm that bears his name, said national attitudes towards higher education were overlaid with intellectual snobbery. Further education had inculcated an attitude of superiority to the needs of industry.

"It is perhaps inherent in the intellectual incest of the academic world that productive industry is thought of as playing an inferior role in society and not recognized as the principal means of support."

Delivering a lecture to the Scottish Technical Education Council, Sir William spoke of the modern age as hypocritical, with more complexes about the creation of wealth than the Victorians had about sex. Modern education could cramp initiative and turn people into bureaucratic fodder, forcing the best to leave the country.

NOTICE BOARD

Chairs

Dr Noel David McLachlan, at present reader in the history department of the University of Melbourne, has been appointed to the newly created chair of Australian history at University College Dublin.

Professor J. F. Stallingford, professor of angiocardiology at the Royal Postgraduate Medical School, has been promoted to the newly created Sir John McMichael chair of cardiovascular medicine.

Dr F. T. Banner, formerly reader in oceanography, department of geology and oceanography at University College, Swansea, has been promoted to the newly established chair of oceanography at the college.

Mr David Boswell, lecturer in sociology at the Open University, has been seconded for three years to a visiting professorship at the University of Malta, where he will be setting up a department of social policy.

Dr Colin Mortimer, reader at Keele University has been promoted to a personal chair in inorganic chemistry.

Dr Ralph Johnson, at present senior lecturer in neurology, University of Otago at Wellington, New Zealand.

Professor Roy Hallitwell, department of civil engineering, Heriot-Watt University, has been promoted to the chair of offshore engineering and head of the new department of offshore engineering.

Forthcoming events

"People and History in Camden" a one day conference is being held tomorrow by the Local History Research Group at the Polytechnic of North London in Prince of Wales Road, Kentish Town. The conference is designed to bring together people interested in local history to discuss the best methods for doing their own research. Further details from The Secretary, department of history and philosophy, PNL. Tel: 607 2789 ext 4058.

* * *

"Politics of the Environment" is a Saturday school organized by the School of Adult and Social Studies of Goldsmiths College and the department of extra mural studies of the University of London, for October 30 at the college. Speakers will be Pauline Marstrand, research fellow, Policy Research Unit, University of Sussex on "Growth Resources and the Environment: The Global Issues", and Tony Hargreaves, senior lecturer in science and society at North East London Polytechnic. Admission 60p.

* * *

"A general Grammar of Music" three lecturers by Ronald Senator, using videotape and other material from the current SSRC project in music, will be held on Wednesday November 10, 17 and 24 at 7.30 pm in the new Jeffrey Hall of the University of London Institute of Education.

* * *

The Polytechnic of North London is holding a festival of arts for the first time from November 8 to 14. The festival will not only involve people within PNL and the surrounding community but also bring a number of well-known artists to North London, like the Stan Tracy Quartet, and Flamenco guitarist Juan Martin. There will be French and Spanish days which will include exhibitions, films and other activities covering the culture of each country and a chance for visitors to see how languages are taught at the polytechnic. Further details from the Festival Box Office, Polytechnic of North London, London NW5.

* * *

"Planning and Resource Allocation in Education", a one-day conference organized jointly by the British Educational Administration Society and the Educational Systems Study Group of the Operational Research Society, to be held on November 22 at the Institute of Education, University of London. Topics will include "Indices of Need: Their construction and use in the allocation of resources for primary and secondary education", by Mr M. Shipman, director of research and statistics and "Cost efficiency in Higher Education", by V. J. Delany, director of financial services, DES. Fee: £3.20. Further details from the Operational Research Society, Neville House, Waterloo Street, Birmingham B2 5TX.

* * *

Dr Colin Blakemore, fellow and director of medical studies at Downing College, Cambridge, begins his 1976 BBC Reith lectures on Radio 4 on November 3. He will talk to Anthony Smith, science journalist and writer about his attitudes to scientific research and the implications his work might have for medicine.

* * *

"Design of Industrial Experiments" a one-day seminar, organized by the department of physics and mathematics of the John Dalton Faculty of Technology of Manchester Polytechnic will be held on December 1. The seminar will deal with the practical statistical problems of designing industrial experiments. Fee: £8.00. Further details from Roger Williamson, department of physics and mathematics John Dalton Faculty of Technology, Manchester Polytechnic.

* * *

"Counselling and Values Clarification", a public lecture by Professor John Paterson, professor of counselling psychology, University of Alberta, will be delivered on November 9 at 4 pm in the Centre for Studies in Counselling, North East London Polytechnic, Livingstone House, Livingstone Road, London E15.

* * *

The Third International Symposium on Microdosimetry: "Applications in Biology", organized jointly by LKB Instruments Ltd and the department of chemistry of Chelsea College will be held on April 4-6 at the college. Topics will include: microbial growth and metabolism, tissue reactions and clinical applications, soils, herbicides and pesticides. Speakers include: Dr M. Hayes, University of Birmingham, Dr R. Kemp, University of Wales, and Dr D. Williams, University of St Andrews.

Noticeboard is compiled by Patricia Santinelli and Pauline Gamble

Max Wall, left, and Leo McKern as Vladimir and Estragon in Waiting for Godot, the BBC production for the Open University.

Grants

Bangor

Electronic engineering science—£85,000 for the initial funding of a workshop established at Bangor by the National Foundation for Cancer Research, Maryland, USA, under the direction of Dr R. Pethidge and Professor T. J. Lewis which will investigate the electronic processes related to cancer; £31,500 from the SRC for an extension to the project on application of scanning electron microscopy to semiconductor devices, under the direction of Dr A. Gopinath.

Applied zoology—£26,257 from the Ministry of Overseas Development for the continuation of work on sub-lethal effects of insecticides on the behaviour of tsetse flies, under the direction of Dr A. G. Gatehouse; £5,780 from Glan-Celgy Ltd to provide a postgraduate studentship to investigate the biology of the moth Heliothis Armigera, under the direction of Dr A. G. Gatehouse.

Forestry and woods science—£13,438 from the SRC for research on the prediction of minimum press time in particleboard manufacture under the direction of Mr A. J. Bolton.

Biochemistry and soil science—£12,550 from the SRC for work on the adaptation of mixed microbial populations to the degradation of xenobiotics, under the direction of Dr P. A. Williams; £10,020 from the British Cancer Research Campaign for further studies on naturally occurring carcinogens, under the direction of Dr Anthea Evans; £7,059 from the NERC for research on the pattern of glucose metabolism in relation to the gametogenic cycle of mytilus edulis, under the direction of Dr J. I. Davies in conjunction with Dr P. A. Gabbott of the Unit of Marine Invertebrate Biology.

Physical and molecular sciences—£19,150 from the SRC for work on metallic ferromagnetic liquids under [illegible] work on [illegible] under the direction of Professor C. J. M. Stirling.

Institute of Economic Research—£7,000 from the English Tourist Board, the Cumbria Tourist Board and Cumbria County Council for the investigation of economic effects of tourism on selected areas with Cumbria.

Social theory and institutions—£2,500 from the SSRC to enable Dr G. Williams to supervise a series of one-day meetings of a research seminar group on social and cultural studies in Wales.

Hull

Biochemistry—Dr F. M. Dickinson—£4,570 from SRC for an investigation of kinetics and mechanism of NADP linked dehydrogenases; Dr C. Ratledge—£1,475 from AB Sorigona for his investigation of short chain fatty acids of micro-organisms.

Physics—Mr B. Lunn—£2,072 from the SRC for his investigation of the growth of large volume high resistivity cadmium telluride single crystals.

Institute of Health Studies department of politics: Dr R. G. S. Brown for an investigation of the role of Members of Parliament in the National Health Service.

Keele

Communication—£10,943 from the MRC for work by Dr E. F. Evans on correlated study of the physiological and anatomical sequelae of cochlear pathology; £21,528 from the MRC for work by Dr E. F. Evans on an investigation of how the peripheral auditory system can code signals over a wide range of intensity.

Sociology—£19,980 from the Department of Health and Social Security in support of research by Professor R. J. Frankenberg into battered wives.

Psychology—£16,639 from the DHSS for work by Dr J. R. Hegarty on evaluation and development of two courses of training in educational techniques for nurses of the mentally subnormal; £10,456 from the Department of Education and Science to wholly made to Professor S. J. Hutt for work on experiences of young children at home; £7,270 from DES to meet increased costs on the previously made grant to Professor S. J. Hutt for work on play, exploration and learning in the pre-school child.

London

Institute of Education: Nursery Education—£74,500 from the DES for a feasibility study into the development of a closer working partnership between teachers and parents, under the [illegible] Barbara Tizard; Disabled Teenagers—£19,705 from the National Fund for Research into Crippling Diseases for a study of the psycho-social adjustment for teenagers disabled by spina bifida and cerebral palsy, under the direction of Dr Elizabeth Anderson.

Middlesex Hospital Medical School: Neurological Studies—Dr C. Allison, Crippled Child for the development of an immunocytochemical technique applicable to the autoimmune demyelinating diseases.

Open University programmes

Sunday October 31

RADIO 4 (VHF)

9.30: Open Forum—A80: Preparing for [illegible]

10.00: Open Forum—RT3 1: Special Student Support Scheme—A Programme for Part-Time Staff.

Friday November 5

RADIO 3 (VHF)

10.30: Open Forum—A83: Preparing for [illegible]

19.00: Open Forum—Vacation Lecture 4: Are People Predictable? Stuart Brown, reader in philosophy.

There are no other Open University radio or television programmes during this week. Repeated programmes

Appointments

Universities

Buckingham

Chairman of the council of [illegible] ment: Sir Ralph Robinson. [illegible] man: Richard Edward Hillier [illegible] members: Mr Timothy George [illegible] Professor Peter W. Campbell [illegible] Patrick Hutber, Professor Ralph [illegible] James, Sir Frank Marshall, [illegible] James Palmer, Mr Edgar W. [illegible] mountain, Mrs Margaret [illegible] fessor Alan Turner, Sir Ralph [illegible] and Sir William McEwen [illegible] Lecturers: Roger Bowen [illegible] Trotter (Law); Paul M. [illegible] (English); Zdenek Dobisek [illegible] mics); Patricia M. [illegible] guages); Dr Mary [illegible] Visiting professors: Meyer L. [illegible] and Roger Sherman [illegible] Robert W. Foster (law); R. A. [illegible] sohn (politics).

City

Press and Communications Officer: Tom Balstow.

Lancaster

Senior lecturers: [illegible] (accounting and [illegible]); G. R. Steele ([illegible]); [illegible] G. Cooper (behavioural [illegible]); Laurence J. Roy (accounting); [illegible] Rogers (educational [illegible]); David Waines (arabic and [illegible]); [illegible] dies); Dr Johanna C. [illegible] logical sciences); William [illegible] Dr Keith J. Devlin (mathematics).

Oxford

Ford's Lectureship: Professor [illegible] Collinson (in English [illegible]). Visiting research fellowship: [illegible] sor Marshall Hall and Professor [illegible] Richard Brulil (Hilary term [illegible]) 1978 respectively at Merton [illegible].

Salford

Lecturers: Dr P. M. Hyde, [illegible] Pentreath and Dr B. B. [illegible] logy); Dr R. H. Bixby (chemical [illegible] applied chemistry); Dr J. [illegible] and A. C. Gatrell (economics [illegible] graphy); Dr J. A. White [illegible] education section).

General

Professor K. W. Patchett, head [illegible] department of law at UWIST, has been appointed legal adviser to the [illegible] been Community (CARICOM) [illegible] regional organization set up [illegible] the major countries of the [illegible] wealth Caribbean.

Mr Gervas Walker, currently the [illegible] of Avon County Council, and [illegible] four representatives of the [illegible] the executive council of the [illegible] tion of County Councils, was [illegible] chairman of the policy committee [illegible] the association which represents [illegible] 47 non-metropolitan counties [illegible] land and Wales.

Mr Roy W. Mayor, who has [illegible] in the British Council's library [illegible] ment since 1971, has been appointed [illegible] British Council Regional [illegible] Bahrain.

Mr Alex McKay, former [illegible] secretary of the Institution of [illegible] Engineers, has been appointed [illegible] of the Institution of Mechanical Engineers.

Dr J. M. Rao, headmaster of [illegible] minster School, has been appointed chairman of the Headmasters' Conference for 1977.

Dr H. S. Darling, Principal of [illegible] College, University of London, has been appointed director-general of the International Centre for Agricultural Research in the Dry Areas (ICARDA) based in the Middle East, from [illegible] October. ICARDA is the [illegible] International agricultural research centres created under the aegis of the Consultative Group on International Agricultural Research.

Course news

The Polytechnic of Central London is holding a course in psychology [illegible] Thursday evenings in the [illegible] Languages, Red Lion Square [illegible] is to create a sufficiently [illegible] background where the nature [illegible] guage and the complexity of [illegible] organism can be further [illegible] under the umbrella of the [illegible] loged subject area—psycholinguistics.

BRIEFING

The economic problems affecting academic book publishing

No academic needs to be told that the prices of the books he wants to buy have gone up considerably in the last five years. Any quick comparison between a new acquisition and a book on his shelf will assure him of this. What is more difficult to state is by exactly how much prices have gone up in different subject areas over this period. Until 1974 no one was collecting figures which related specifically to the prices of British academic as opposed to general books.

Since 1974 the Library Management Research Unit, now based at Loughborough, has been collecting data on the average prices of British academic books based on the division of the copyright intake of the University Library of Cambridge into academic and non-academic items. This library is one of four which is able to require by law that a copy of all British publications is deposited with them.

The idea is to examine the complaint of librarians that the University Grants Committee Tress/Brown index measures the average price of books that university libraries can afford to buy from limited budgets and not the average price of academic books. LMRU's figures are the best available information on academic book prices.

The preliminary results for 1975 show that British academic books have risen in price by 21 per cent since 1974, with the average price standing at £5.56½ compared to £4.58½. Hardbacks were found to cost an average of £7.62 compared to £2.40 for paperbacks.

Predictably the most expensive subject areas were the sciences, with chemistry top at £12.16, physics £11.15½, biology £9.45½, prehistory and anthropology £8.12, geology and meteorology £8.07½ and medicine £8.07½. Even these figures will not reflect the whole cost of books to an academic or student since they do not cover American imports, which tend to have higher average prices than those published here.

The elements of the price of a new book fall approximately as follows—the proportions varying from book to book:

Price	100
Production	20
Author's Royalty	10
Bookseller's Discount	33
Overheads	30
Profit	7

Production

The rule of thumb most publishers use is that the cost of production is one fifth of the price of a completed book. The items included under this general heading are: paper, binding, printing and warehousing. Although all these costs have risen with inflation the actual proportion of production costs to the published price has gone down slightly over the past five years or so.

Printing costs increased by 70 per cent between 1972-75. Wages are the major item in the printer's costs, making up at least half the bill. Trade union pressure for higher wages and restrictive practices have pushed up printing costs. It is possible to find cut-rate printers but the "cost" will be much lower standards of production.

The costs of binding have also risen by 70 per cent in the 1972-75 period. Economies of scale do operate to make it cheaper the more copies that are bound at one time, however in order to match supply of finished copies with demand it is generally advisable not to bind the whole print run at once, but to leave some as unbound sheets.

The cost of paper almost doubled between 1972-75. Britain is heavily dependent on imported supplies of virgin wood pulp: in 1970 pulp imported from Scandanavia and Canada accounted for 53 per cent of the cost of UK-produced paper and in early 1976 that proportion was more than 70 per cent because of the sharp rise in timber extraction and processing costs and the drop in value of sterling.

The days when a printer or binder would store bound or unbound sheets for practically nothing have long since gone. Stanley Unwin in *The Truth About Publishing* cites the following prices for storage: for 1,000 sheets per month after the month following printing, [illegible] over the next two years; for bound stock or folded sheets, 1-2p per book per month for the first two years, 13p-25p over subsequent years. "The charges can amount to many thousands of pounds a year for a large firm", he wrote. Warehouse costs also include preparing invoices, fetching, packing and dispatching orders. Fulfilling the single order is a particularly expensive operation.

Author's royalty

This is generally calculated as about 10 per cent of the price of the book. However, in the case of a highly specialized academic monograph which is most unlikely to be a commercial success a publisher might well not pay a royalty. Again, if a book requires expensive plates and illustrations these costs might be considered as part of the author cost rather than the production costs. Nevertheless royalties either make up a larger proportion of the price than profits.

Bookseller's discount

Under the Net Book Agreement—the result of a successful defence in the Restrictive Practices Court against price-fixing charges—publishers are one of the few primary manufacturers allowed to fix the retail prices of their products. In order to secure the display and distribution of their books, publishers give booksellers a trade discount, made by the bookseller to the type of order.

The best terms, usually 33 to 35 per cent are given on subscription orders, that is, orders for stock made *before* publication date. In an unproven product and for displaying the book on the first day of publication.

Discounts on an established textbook order will be less, about 25 per cent, since here it is the publisher who has found the market and no risk is involved for the bookseller. Discounts on single orders are also less because again there is no risk.

Booksellers are constantly pressing for better terms. The chart shows what happened in 1974 to the average £1 of sales. 1974/75 survey of firms selling books only. It is clear that a reasonable level of discount is necessary if sufficient stocks are to be held. But if discounts go up so will the price of books.

The same survey showed that although the gross profits of the larger bookselling businesses increased this was generally due to their selling a "mix" of goods. The technical, scientific and university bookshops selling books alone did not manage to increase their gross profits at all and therefore have been hardest hit by the unavoidable growth in expenses.

Overheads

As a proportion of the price of a book overheads have been increasing. Academic publishing is not a high volume business and this tends to raise overheads in relation to price. Under this heading are included staff salaries and expenses, rent and rates, heat and light, insurance, and marketing. All these costs are going up in a way that revenue simply cannot match, for the market for books cannot absorb higher and higher prices indefinitely.

The calculated profit margin varies from book to book, from about 5 to 9 per cent. However, it should be remembered that this calculation depends on the whole of the print run being sold, and that the profit margin on a reprint is generally greater than on a new book. Overall publishers' profits range from about 5 per cent net on sales at the bottom end to about 12 per cent at the top. Since most publishers other than university presses publish a mixture of academic and general books it is impossible to sort out the two categories, though law, medicine and science textbooks are a distinct and very profitable branch of academic publishing.

Print run

The size of the print run of a book is a vital part of the price equation. In a period when money values are stable and warehousing is cheap, it does not matter so much how many of a particular book a publisher decides to print. But when inflation and lending rates are running high and storage is expensive it matters a great deal, for all stock held represents locked-up capital.

Publishers are undoubtedly trying to keep the numbers they print as low as possible. Opinions vary on what is the lowest feasible print run for an academic book, but we are talking here of from 1,500 to 5,000 according to the degree of specialization.

However, the lower the print run the higher the price will have to be. So the publisher's dilemma is whether to risk printing a larger number in the hope of good sales over five to 10 years, or whether to print fewer at a higher price and risk potential buyers not being able to afford it or at least not being *prepared to afford it*. Publishers complain that book buying habits have not kept up with inflation. Someone who is prepared to pay £3 for a theatre ticket and £4 for a meal afterwards balks at paying out £7 for a hardback which will last a lifetime. This seems to be more true of academics in the arts and social sciences than in the sciences. Scientists have got used to paying more, perhaps because it is easy to understand that complicated type setting must make the finished product more costly.

The price/numbers dilemma can be eased slightly by, first, not binding the whole of a print run. If it then transpires that a book has not sold as well as was hoped, unbound copies can be pulped, and binding costs, though not storage, will have been saved. Second, by printing a limited number of a high-priced hardback with an eye to library sales, and a larger quantity of a cheaper paperback edition for individual sales. In effect, this is letting the hardback subsidize the paperback edition.

It is not, as sometimes thought, so much cheaper to produce a new book in paperback than hardback. The successful, popular paperback firms rely on huge print runs (25,000 minimum) of reprints, that is, books which have already proved their salability.

The backlist

The price of *new* books is only part of the story. A publisher has three main sources of cash: from the sales of new books, from the sales of the backlist, and borrowing from a bank. About 10 backlist titles are sold for every one new title, so it is above all the income from backlist sales which pays a publisher's current bills.

If these sales do not provide sufficient income to pay for next month's bills then high interest borrowing from a bank is necessary and a cash flow crisis is likely to result.

If the backlist is underpriced in this way it means also that the prices of new books and reprints will have to bear the brunt of inflation and be proportionately higher, so the purchaser of a new book will be subsidizing the purchaser of an old one. There is no doubt that this discrepancy between the prices of old and new titles, which grew with the unprecedented inflation of the 70s, did result in serious cash flow problems for a number of publishers.

The stricter accounting and pricing, which many have introduced to stop this happening again, make some price rises look excessive. But many books were too cheap for too long and adjustments which should have taken place some years ago are only taking place now. However, there were and are reasons against continually repricing the backlist:

- It is unpopular with booksellers because potential purchasers are put off when they see several stickers covering the original price.
- Purchasers do not appreciate that even if there has been no reprinting or rebinding, the storage alone will have cost money. To give an extreme example, if a book had been in storage for 50 years you would not expect to be able to buy it for 5p today.
- There is a feeling that what is newest is best, and a tendency to forget that if a book has proved its popularity, its market will bear a higher price.
- The repricing operation itself involves managerial and warehouse staff time. It probably adds another 20p to the new price.
- Since the Price Commission began its work, those firms with a home sales turnover of £10m or more a year have to submit every projected increase for vetting. For a publisher with a backlist of say 14,000 books the idea of submitting 14,000 separate applications is obviously lunacy. This has seriously restricted the amount of repricing the large firms have been able to carry out.

Theoretically when a book is reprinted—reissued without editorial changes—production costs should be much less than originally because new typesetting is not necessary. But inflation has meant that increases in the cost of paper, binding and labour make it almost as expensive to reprint a book as it was to print it for the first time. A new edition, a reprint with substantial editorial changes, will be correspondingly more expensive.

Ways of cutting costs

Production is the main area in which a publisher can look to save on costs. However, many feel that they can only go so far with this kind of saving: beyond a certain point the decline in the appearance of the finished product will simply have the effect of reducing sales. Ways to cut costs include:

- New methods of setting. Photocomposition has replaced hot metal type composition, and computer typesetting and typewriters for producing "camera ready copy" have been introduced. Using the latter method the author types his edited manuscript with an IBM typewriter and it is then ready for printing. The finished product with its unjustified lines and typewriter print is not always popular.
- Reducing type size will save on paper costs but can be hard on the eyes.
- Printing footnotes at the end of the book rather than at the bottom of the page, which involves a mix of type, also saves money.
- Use of cheaper bindings.

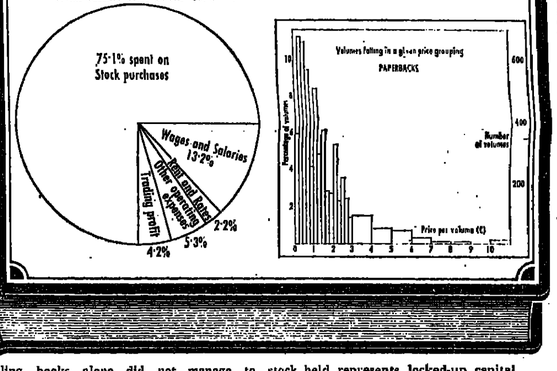
Even these limited changes have brought vociferous complaints from those brought up on the idea that quite apart from its content a book should be an object of beauty. Further developments on these lines will depend on the reader being prepared to lower his expectations about the form of the product.

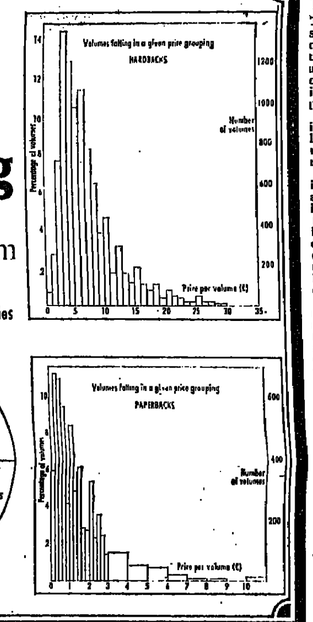
The high cost of publishing

by Philippa Ingram

What happens to the average £1 of sales

FIRMS SELLING ONLY BOOKS—1974





A wind of change blows from the academic right

The Conservatives have never quite managed to live down John Stuart Mill's description of them as "the stupid party". In marked contrast to the parties of the left, the Tories have traditionally lacked the support of academics and intellectuals. Now, however, this seems to be changing.

A new academic right is emerging to challenge the long-standing supremacy of left wing views among the British intelligentsia. Two years ago John Vaizey commented on the current intellectual scene (*Times Educational Supplement*, December 26, 1975): "The trendy lefties who were the apotheosis of the 1960s and early 1970s look like dinosaurs." *It now begins to look as though conservatism could be the trendy creed for academics in the late 1970s.*

There have always, of course, been some right wing academics and intellectuals. But they have not exactly been thick on the ground, nor conspicuous for their youthfulness. Michael Oakeshott has been the doyen of conservative philosophers for nearly half a century and it is some considerable time since Maurice Cowling took over the mantle of Herbert Butterfield and established Peterhouse, Cambridge, as something of a stronghold of conservatism.

The past 12 months have seen a dramatic upsurge of academic interest and involvement in right wing causes. A series of advertisements inserted early last year in the *Spectator* by an antiquarian book seller in Eastbourne anxious to set up a study group on major thinkers of the European right with a view to influencing Conservative Party philosophy drew a large number of replies from interested university and polytechnic lecturers and research students.

A strongly propagandist book published by Aims of Industry and entitled *Prophets of Freedom and Enterprise* contained articles by Professor Antony Flew of Reading, on J. S. Mill as a prophet of libertarianism and Professor Alan Walters of the L.S.E. on the relevance of Milton Friedman, alongside pieces by such popular right wing pundits as Peregrine Worsthorne extolling the virtues of free enterprise.

Even more spectacular than the upsurge of academic interest in right wing philosophy, is the dramatic increase in academic participation in the actual policy making of the Conservative Party. Lord Blake, the Provost of Queen's College, Oxford, says that until recently he felt himself to be very much the odd man out among academics involved in party politics because he operated within the Conservative Party and not in one of the parties of the left.

He is no longer alone. Last year a group of academics and politicians got together to form the Conservative Philosophy Group. The group, which meets regularly to hear papers delivered by academics, is run by John Casey, an English lecturer at Calus College, Cambridge and an editor of the *Cambridge Review*, and John Scruton, a philosophy don from Birkbeck College, London. Its aim says Casey, is to formulate a coherent Conservative political philosophy and counteract the intellectual dominance of the left.

Academics who have attended its meetings include Michael Oakeshott, Richard Griffiths, professor of French at Cardiff, and Henry Wade, Regius Professor of Civil Law at Oxford. Mrs Margaret Thatcher herself is actively involved in the group. Scruton and Casey, both of whom are in their mid-thirties, are currently trying to recruit more young dons to their predominantly Cambridge based group.

While Cambridge looks like becoming the centre for a new academic interest in conservative philosophy, Oxford is predictably exhibiting concern with more practical matters of Tory policy. This summer a group of young Oxford dons brought out a volume of essays attempting to restate Conservative Party policies on a whole range of issues.

The idea for the book, entitled *The Conservative Opportunity*, arose out of a dinner of the Oxford Region of the National Association of Conservative Graduates held at Hertford College last November. The essays were put together and edited by Lord Blake and John Patten, a fellow of Hertford College and the Conservative parliamentary candidate for the City of Oxford constituency.

Lord Blake, top, is no longer alone. Professor Anthony Flew is among the new academic right

The contributors include six young Oxford dons: Eric Barendt, a lawyer at St Catherine's College, Gillian Peele, politics tutor at Lady Margaret Hall and a member of the editorial board of the Bow Group's magazine, *Crossbow*, John Redwood, a fellow of All Souls and a member of Oxfordshire County Council, Vernon Bogdanor, a politics don, Peter Sinclair, an economist, and Graham Richards, a chemist, all from Brasenose College.

Lord Blake reckons it is significant that the essays in *Conservative Opportunity* were written by young Oxford dons, "a category", as he says, "which for an entire generation was a major source of recruitment to the left". He believes that the sudden upsurge of interest in Conservatism on the part of intellectuals and academics is to be explained partly by the current intellectual sterility of the left, partly in terms of the rejection of the ideological framework established by Beveridge and Keynes and partly also by the traumatic effects within the Tory Party itself of the loss of two elections in 1974.

The last time the Conservatives went through a fundamental process of rethinking their philosophy, he points out, was after the shock of their 1945 defeat which led to Quintin Hogg's reformulation of party doctrine in "The Conservative Case". Lord Blake feels that the Conservatives are now going through a similar period of fundamental reappraisal and that this gives them a particularly strong appeal to academics many of whom are already worried by the growing contradictions in the welfare state.

"There are signs of this kind of rare and profound change in the intellectual climate which occur only once or twice in a hundred years, like the triumph of the entrepreneurial ethos in nineteenth-century England, or the rise of Voltairean scepticism in eighteenth-century France. There is a wind of change blowing through Britain and much of the democratic world — and it comes from the right, not the left."

As yet it is a little early to estimate just how strong the wind is, but it certainly looks as though conservatism is becoming intellectually respectable and we could be witnessing the rise of the academic right.

Ian Bradley

Will Cambridge stick with Homerton or cut the ties?

The future of Homerton College, Cambridge, hangs in the balance. Before Christmas the university must decide whether to strengthen its traditional links with the college or abandon it to an uncertain fate.

A report favoured by Homerton and the university's education department has already been prepared by the council of the senate. It supports a four-year degree in education, which, its advocates claim, would allow students to develop their professional and academic skills to a higher level than the present BEd.

Students would spend the first two years attached to Homerton, which would become an Approved Society of the university, and the second two as members of the university. They would specialize in one subject throughout and would also enrol for the new degree, whereas at present only some choose to do the BEd in a fourth year after completing the Certificate of Education.

Miss Alison Shrubsole, Homerton's principal, argues that the new degree has two main advantages. It includes teaching practice in the fourth year instead of much earlier and it allows study of the curriculum much later in the course when students are in a better position to understand its implications.

Practical work could be combined with academic study in depth. A student training for secondary school work, for example, might undertake a study of reading as part of her dissertation.

Professor Paul Hirst of the department of education is equally enthusiastic. In a paper to the senate he said: "Now is hardly the time for a decrease in the number of teachers who have had the benefits of the kind of education and professional preparation this university can provide."

The education department had benefited considerably from links with Homerton through the BEd degree. New and more specialized teaching opportunities had arisen, as had chances for expanding research, he said.

The rethink about Homerton's future has been caused by the upheaval in teacher education. At the moment the college's students are matriculated and presented by Newnham College, but it feels the need for a more permanent arrangement.

Why should Homerton not do as other colleges associated with the university and seek affiliation elsewhere? Professor Hirst's reply is that Homerton is different. It has long-established links with the university, high academic standing and an institutional structure and status unlike that of many colleges.

Not everyone in the university agrees. Dr George Reid, mathematician and fellow of St John's is a leading member of an opposition whose concern centres largely round the question of standards. Dr Reid is not convinced that Homerton students can cope with the same final examination papers as undergraduates, especially in mathematics and science. "It is a fact that you cannot teach people with Ds and Es at A level the same way as people with As."

A colleague of his, Dr J. E. Inglesfield, says that the average mark for BEd students in the special physics paper over the past two years is below 50 per cent, a third-class pass.

Homerton's supporters [illegible] Dr Reid's view. Professor Hirst, [illegible] vice-president of Wolfson Hall, another Approved Society of the university, argues that the best BEd students taking the Greek education paper have grappled with the required portions of Plato and Aristotle as well as some of the better undergraduates. Like many people, he believes that Homerton's association with the university would raise standards still further.

All Homerton students have minimum university entrance qualifications and some turn down university places to go there. Professor Hirst is well satisfied with the calibre of the college's BEd candidates.

Apart from the question of standards, Dr Reid and others point to the fact that the proposals being considered by the senate "turn the [illegible] upside down". Mr Deryck Mumford, principal of the Cambridgeshire College of Arts and Technology, attacks them on the ground that they require commitment to teaching right at the start of the course—the very situation James tried to avoid.

"There is no other teacher-training establishment in the country where you do a four-year honours course or nothing. Homerton may well be able to attract enough students of the right calibre for this. But what if some want to leave after two years? They will have no qualification at all."

Mr Mumford believes a joint Homerton/CCAT proposal for a BEd course would be entirely feasible but not on the lines of Homerton's present scheme. His Academic Board would be unlikely to agree to any proposal which did not include DipHE and ordinary BEd paths for those unwilling or unable to take the four-year degree course.

Should the attempt to join the university fail some form of merger with CCAT or an independent Homerton will be the only possible solution. Apart from the difficulties over course shape, which Mr Mumford points out, there are other problems about a link between the two.

Mr Mumford agrees with the council of senate report that a link between a voluntary college supported by a direct grant from the DES and a college maintained by a local authority presents "substantial administrative difficulties". But he says they have been overcome in two cases.

He also believes that Homerton could become an independent college validated by the Council for National and Academic awards, of whose Committee for Education he is a member. He says small and specialized institutions have received CNAA validation, quoting as examples the London Bible Institute and Darlington College of Arts.

But many people in the university believe that if the current proposals are turned down the future for Homerton is bleak. The "poor little Homerton" argument is the one which worries Dr Reid and his supporters most. In his paper Professor Hirst said that if the merger with the university failed [illegible] would be great pressure [illegible] ton to be absorbed into a [illegible] tution, which would involve [illegible] cal transformation of its [illegible]

Miss Shrubsole agrees that a merger would inevitably [illegible] distortion of existing and [illegible] courses. It would also make [illegible] cult to preserve the collegiate [illegible] of Homerton. As the Secretary [illegible] State's nominee on the Council [illegible] the CNAA she has noted that [illegible] practice the effect of validation [illegible] degrees in small independent [illegible] tutions is to severely limit [illegible] range of subjects. The [illegible] Bible Institute and Darlington [illegible] hardly comparable to Homerton.

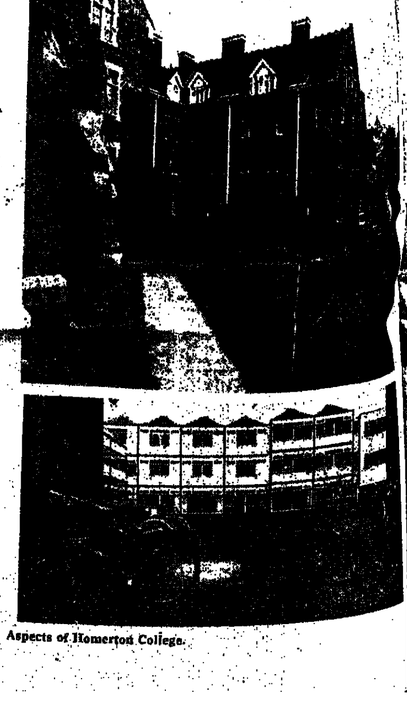
On the question of the [illegible] Report she says: "[illegible] people have found that it is [illegible] sible to leave all [illegible] elements in a teacher-training course to one final year and [illegible] them properly.

"Nowadays young people are extremely aware of what they are doing when they choose [illegible] Students at Homerton [illegible] this out carefully. The BEd degree is a qualification which [illegible] ticity in careers other than [illegible] and it is going to [illegible] importance."

Will the scheme to make Homerton an Approved Society [illegible] through? The matter is now [illegible] the council of senate [illegible] decide whether to [illegible] approving the new education [illegible] and the link with Homerton [illegible] members of the Regent House [illegible] for a ballot, as is likely, then [illegible] be a vote of all Regent House members.

The council will be informed [illegible] its deliberations by a recent debate in which the majority [illegible] speakers spoke warmly in [illegible] the proposals, and also by the [illegible] decision to give informal [illegible] Whether, as Dr Reid hopes, [illegible] university conservatives [illegible] keeping their own counsel [illegible] emerge from their corners [illegible] against the scheme, remains [illegible] seen.

Judith [illegible]



Aspects of Homerton College.

Frances Gibb reports on the outcome of ten years' excavation in an ancient city

Digging up of Winchester goes into book form

Ten years' archaeological excavations in Winchester will shortly bear fruit with the publication of the first of a series of eleven volumes of the archaeological and historical research.

Volume one, *Winchester in the Early Middle Ages: an edition and discussion of the Winton Domesday*, will be published, like the rest of the series, by the Winchester Research Unit, a body set up to ensure that research would eventually be made available to the public.

The unit is a group of 18 full-time (and about 18 part-time) researchers, most of whom actually worked on the excavations and who are now seeing the project through its final stages.

The unit grew out of the excavations, themselves a reaction to the massive town development planned for the city during the early 1960s.

Martin Biddle, director of the unit, says that no systematic attempt was being made to investigate the city's archaeology and history. "The potential of Winchester in this respect was enormous, but it was a wasting asset. At the beginning of the 1960s one could look forward to a decade's extensive rebuilding; an hotel, reconstruction of the law courts, a project for extending the county council offices, 27 acres of urban renewal and the probability of a new traffic plan."

Faced with the prospect of Winchester's history being destroyed, Mr Biddle had the idea of an excavation committee, which would carry out archaeological excavations and allied historical research in the city, both on sites threatened and unthreatened sites.

From the start the digs at Winchester were different from those carried out in other cities and were a precedent for a new form of urban excavation.

They had two features: first, they dealt with all periods of historical remains. Until then most excavations had concentrated on one period, in particular Roman. Second, they were concerned with the city as a whole. "We were interested in the urban phenomenon: how the city developed, how it changed; how it waxed and waned and what it was like in different periods", Martin Biddle explained. It was a concept of urban excavation later to be copied at Lincoln, York, Norwich and Southampton.

The committee was set up in 1962 under the chairmanship of Mrs E. C. Neate, then mayor of Winchester, with Mr Biddle as secretary and director of the excavations which took place every summer for the following 10 years.

Its budget of nearly £150,000 over the whole period came from a variety of sources. The Department of the Environment gave nearly half, Hampshire County Council nearly a fifth, Winchester Corporation 5 per cent and the British Academy 2.5 per cent.

Most of the remaining quarter came from two American universities: North Carolina at Chapel Hill and Duke. In 1964, through the interest of Professor Urban T. Holmes, from North Carolina, an agreement was made by which the two universities provided money and then sent their students every summer for experience of digs. About 3,000 students from those and other American universities came over the ten years.

After four year's digging, there was so much material that publication became impossible without a full-time organization. The Winchester Research Unit, responsible to the excavations committee, was the result, on the lines of similar units abroad, particularly Poland. Until then information from excavations in England had not often been published and so public funds had often been wasted, Martin Biddle explained.

Money was finally obtained for the unit in 1968. It comprised a historian, some research assistants, a conservator, a finds draughtsman and administrative staff, together with a large number of part-time volunteers.

Its funding has been divided roughly between the Department of the Environment (39 per cent), the Calouste Gulbenkian Foundation (28 per cent), Hampshire County Council and the Winchester Corporation (each 14 per cent) and others, including the Social Science Research Council and the Leverhulme Trust Fund. When the unit closes in 1977, its cost will have been some £413,000.

With the publication of the volumes, the unit's main work will end. No more "finds" are coming in from the excavations and now it is a case of categorizing, restoring and writing up.

The historical research, undertaken by Derek Keene, falls into two parts. The first is related to documents giving evidence about the city in the twelfth century and also around 1300 onwards. The second is a project supported with £20,000 from the SSRC to reconstruct the histories of properties in the later mediaeval city in terms of what they looked like, what the inhabitants did, and how the pattern represented by the houses, yards and gardens relates to the changing pattern of land use, and the distribution of trades and wealth.

The excavations themselves and categorizing the finds will provide material for other volumes. Mr Biddle's wife, Birthe Kjølbye-Biddle, who was in charge of the excavation of the old minster, is writing on its archaeological development through a stratigraphic study of the surrounding areas.

Ms Katherine Barclay, who is categorizing the pottery finds, is writing on the evidence it gives about trade and industry in Winchester. It was partly because of those finds, she says, that the existence of a Roman fort in Winchester during the first century AD was confirmed.

Mrs Susan Keene, the conservator, has the task of selecting some 10 per cent of the 20,000 objects (buckles, knives, wood, jewelry) for conservation treatment. The rest are kept unconserved. She deliberately selects everyday objects as well as art objects: "the art objects were representative only of what the rich people were using."

Excavations at Winchester Cathedral.

The bones are dealt with separately because the bulk amounts to as much as the rest of the finds together. The human bones have gone to the British Museum and the animal bones are being sorted in Winchester and studied both for zoological and economic and social evidence.

When the unit has been phased out in 1977 excavation in Winchester will continue under the care of the city rescue archaeologist, Mr. Kenneth Qualmann, who is at present attached to the unit but is an employee of the council. The city development programme has been slowed down but there are still plans in the pipeline, the most celebrated being the motorway.

Martin Biddle is a pragmatist and does not claim that all can be saved: "But we can make informed decisions as to what is best to save", he says.

He is also against archaeologists conflicting with town planners. It is up to archaeologists to find out when planning applications are made and if there is to be an excavation, to arrange it before planning starts. "We cannot have archaeologists lying down under bulldozers. It is bad for archaeology and it disrupts schedules, which are as important to them as ours are for us."

In the meantime, however, both the research and the finds of the committee's excavations are presenting problems to the unit. The research, in the form of the series, needs funding; it is estimated that £2,000 is needed to subsidize publication of each volume and only the first four are paid for.

The difficulty, according to Mr Biddle, is that public funds cannot be used for what is defined as a "commercial" publication, and so the unit has to raise the money from other sources.

The finds, with the records, photographs and drawings, amount to about 10 times the holdings of most city museums and at present Winchester Museum has not room for them all. The finds and records are indivisible, Mr Biddle says. "We cannot let the finds go to a museum which cannot provide archive facilities."

The aim is for the museum to provide a resources centre to take the finds and records, but the problem—again—is money. "The Department of the Environment says conservation and museums is not its responsibility. The Department of Education and Science do have responsibility, but do not understand the nature of the responsibility that rescue archaeology puts upon them."

If money is found, he estimates the building could be ready in two and a half years, but in the meantime there is the problem of storage in unsuitable buildings. Martin Biddle argues there needs to be statutory responsibility for museums and archives. "The remains are not an inconsequential end product; they are an integral part of the whole operation."

Winchester Studies. Volume one. *Winchester in the early middle ages; an edition and discussion of the Winton Domesday* by Frank Barlow, Martin Biddle and D. J. Keene. Clarendon Press. £25 (until December 31; thereafter £32).

228 learned societies with only a cash shortage in common

The recently published survey of the learned societies by a joint committee of the British Academy and the Royal Society reveals a [illegible] taken by inflation on [illegible] It will undoubtedly provide [illegible] for appeals to the Department of Education and Science, the University Grants Committee and the British Library for money and help in kind.

It is the first such investigation [illegible] a detailed picture of the [illegible] existence of many societies, large numbers of which have no permanent staff and no [illegible] For some this [illegible] and meetings [illegible] from subscriptions.

What is immediately apparent from the list of 228 societies which responded to a questionnaire from the joint committee is the danger of generalizing about them. They range from the obscure, such as the Pali Text Society or the Unitarian Historical Society, to the celebrated Royal Statistical Society and the Linnean Society; from the ancient, such as the Royal Asiatic Society, to the modern Society for Long Range Planning; from the theoretical and Philosophical Society to the severely practical Institute of Refrigeration.

This great diversity and the proud independence of each society was reflected in their answers to the questionnaire. The report concludes: "In some areas of interest it is clearly not true that there are too many societies for the body in that field is unique; in some other areas, particularly perhaps in the biological sciences, there does seem to be a plethora of societies, with dividing lines which seem to be very fine.

"The rather negative response to the question on amalgamating indicates that the societies attach great importance to their separateness though there are indications that the societies in the geological field are moving closer together. If indeed in some fields there are rather too many societies, the answer would seem to lie in the direction of co-operation, with the gradual development of joint activities leading to the build-up of mutual confidence with federation and perhaps amalgamation as an ultimate goal."

Total membership claimed by the societies touches one million, but of these nearly two thirds are in the 21 largest organizations with memberships of more than 10,000. Membership of societies as a whole has grown in the past four years despite the fact that most of them have raised subscriptions at least once in the same period.

At least half the societies have libraries, some of which represent quite extensive collections and many thousands of volumes. They are nearly all publishers in their own right, issuing some 380 periodicals and a range of reports and occasional books.

Publication in fact was one of the societies' greatest concern. Paper prices and publication costs have risen dramatically. Most societies have a national membership scattered throughout the country so the distribution of periodicals is in individual packets with resulting high unit costs.

Such increases can only be met by higher subscriptions which bring the fear that membership will decline. Many scientists, for instance, have multiple subscriptions and as prices rise begin to prune their lists. Public and university libraries have reduced budgets and so pick and choose more carefully among periodicals.

The report predicts: "It is to be expected that 'rationalization' within and between educational institutions in the same area, and the painful choices which face librarians, will lead to the cancellation of many subscriptions, thereby adding yet another twist to the spiralling costs of the learned society publications."

One hundred societies lack any kind of permanent headquarters. Many depend on the universities for housing their officers and providing meeting places. The report discusses the various suggestions that have been made for a central "home" for societies in central London, hinting that the Royal Society and British Academy ought to take the initiative.

Several schemes are afloat. Under the Royal Society's aegis there have been discussions about using private foundation money for a centre in Notting Hill to provide offices for a few societies with common provision for lectures, a canteen, "club" facilities and printing equipment. The Royal Geographical Society has considered redeveloping the site of its building in Kensington.

These schemes involve not only finding a source of capital—at a time when public expenditure cuts rule out central government—but also an urgent look at the careers to be offered to the societies' officials. According to the report, pension and salary arrangements for staff are extremely varied and generally inadequate. It suggests the Royal Society and British Academy set up a working party to investigate.

The report's conclusions favour both the injection of money from the Government and a large measure of self-help and cooperation among the societies themselves.

The need for money is stated dramatically by the report's author, Mr Jack Embling, a former Department of Education civil servant, who did the survey work on behalf of the joint committee. He says: "The main and overwhelming impression left by this survey is the extreme vulnerability of the learned societies particularly as a result of inflation.

"This is extremely serious in purely financial terms but seems to be even more significant because of the psychological effect of the battering the societies have received from so many directions at once. Though there are obvious exceptions in the few large professionally run organizations, most of the societies are amateur in the true sense of that word, inspired above all by their strong interest in their subject and concerned overwhelmingly with the purpose of their societies, which is to further and make available to all concerned knowledge and discovery in their field."

Financial help could take the form, the report suggests, of tax concessions; income tax allowances on subscriptions or relief on investment income. A plaintive note comes through when smaller societies' difficulties with VAT is discussed: the machinery of registration and exemption leaves many officers utterly confused. But here the Royal Society and British Academy might have a role in providing clear guidance to the societies elucidating the various regulations and perhaps negotiating with government on their societies' behalf.

The report firmly rules out direct cash assistance to the societies, preferring selective aid channelled through the budgets of the Academy or Royal Society. They already make awards for publications, research libraries and excavations and it would seem a natural extension.

New money would be needed, however, to support the collective activity of the learned societies, on which the report sets great store. For example publishing costs could be reduced by the establishment of a learned societies' printing press; possibly under the auspices of one of the university presses with financial help from the UGC. On the distribution side a central agency might be efficient.

The report hints that an appeal by the Academy and Royal Society to the Post Office on postage costs would be a reminder to the Government of the plight of the smaller societies. It also boosts the work of the Association of Learned and Professional Society Publishers in providing technical information on copyright, distribution and VAT.

Yet the gist of the report remains the need for money. Without it the associations of antiquarians, astronomers, numismatists, pteridologists, information scientists, statisticians and palaeontologists face a distressing future.

David Walker

Motivation, not science, is clue to saving energy

David Canter and Howard Miles describe the results of a survey of university energy conservation

Although the oil crisis and the three-day week seem to be things of the past and the pleas of the energy conservationists have become more muted, universities, like many other government funded organizations, are still under pressure to give energy conservation a high level of importance.

The price of oil has increased about four-fold since October 1973. Electricity and gas prices have increased substantially in recent months; as have the costs of water and local authority rates.

In line with general government cutbacks in public expenditure, the funds made available to the UGC have been reduced. These restrictions in finance are passed on directly to the universities, which end up between the hammer of rising prices and the anvil of the UGC.

Energy conservation could provide at least a partial escape from these pressures. There seems little doubt, from a NEDC Report in 1974, that enormous amounts of energy are wasted in our society. We are technologically capable of conserving this loss. The wastage typically arises from such well known factors as poor building insulation, inefficient heating and lighting systems and profligate uses of water and energy sources.

The possibility we considered, therefore, is that weaknesses in energy conservation are due not so much to scientific ignorance of the engineering involved but to organizational and psychological problems in their implementation.

In the autumn of 1975 the University of Surrey Research Committee sent a letter to the registrars of 50 universities and colleges, asking what their university had done to increase energy conservation, how effective they thought these measures had been and any comments they had on the topic. Over a period of three months 43 universities replied, a rate of response which indicates a high degree of interest and concern.

From these replies, which in many cases were very detailed, it was possible to identify seven distinct categories of action aimed at conserving energy. They covered a very wide range; from the general publicity poster featuring a buxom blonde from Manchester University, to the research scheme into an energy-autonomous house contributed by Brunel. However, it is the general pattern underlying these activities that is most revealing.

First, there is little detailed information about the actual *effectiveness* of any of the activities. This is presumably because of the difficulties of monitoring their impact, even when the tactics are as apparently simple as removing light bulbs.

The problem here is that calculated savings can be drastically altered by the attitudes and actions of building users. Energy systems are rarely installed at the present time in ways which allow for small sections to be readily controlled, let alone monitored. Such devices add to the capital cost of buildings and this area has been under siege for some years now.

When it comes to measuring the impact of tactics such as memoranda of exhortation sent to heads of departments or the influence of [illegible] on thinking behaviour, [illegible] in one attempt we made to obtain more detail on this aspect at the University of Surrey we found that only two out of a cross-section of 113 respondents had any knowledge of a memorandum sent out by the pro vice-chancellor to heads of departments. After a number of general publicity documents had been released, all the people approached eventually declared some awareness that the university was concerned with energy conservation, but only a quarter of them felt the publicity had any effect at all on their energy related activities.

Against this background the more that can be done the more likely is the message to get through, and as a consequence, it was valuable to see what pattern underlay the various energy conserving activities.

What emerges from this comparison is that the older universities are, the more likely they are to have taken a lot of energy conserving actions. This is almost certainly due to the size and dispersal of their, typically, older buildings.

It suggests that a major part of their recognized energy conservation problem is the design of the buildings they have to use. Of course this is only a trend, and there are many exceptions.

Another possible application of the cumulative sequence apparent from the activity categories is that an overall strategy for energy conservation may be derived by combining the activities carried out by each university. This overall strategy can be represented as a flow diagram which may be useful as an aid to decision making. The intriguing thing about this layout is that most universities are acting on some parts of it but few on all of it.

The critical change from being concerned about energy conservation to being *active*, seems to depend most directly on that ubiquitous institution, setting up a committee and further, the appointment of an associated officer. It has been suggested that this important role of conservation officer might draw upon underemployed science or engineering departments.

However, a more focused survey of attitudes towards energy conservation within one university suggests that those newly created officers could have an uphill task when it comes to convincing the rank and file that they should change their behaviour to conserve energy.

Even the disparity between the 86 per cent response rate we obtained from registrars with the 15 per cent response we obtained from technicians operating heavy demand machines illustrates that concern for energy use does not really find its way down to the university grass roots. This was also indicated by the fact that over half of the people interviewed thought that energy conservation was "a matter for the university authorities and heads of departments". Indeed, 15 per cent felt that the university was "exaggerating its energy problems".

This was also borne out by responses to a subsequent questionnaire distributed to a sample of 50 respondents. When asked to select the closest approximation to the figures for fuel consumption or heating bills in their own university respondents almost invariably guessed lower figures than the true ones. But perhaps the finding of greatest significance for any conservation officer is that a comparison of respondents who had previously been interviewed about energy conservation with those who had not, showed that whilst the former had more knowledge of the actual energy situation within the university they were on average less concerned about it.

This lowering of concern might reflect changes over time; a sense of crisis is hard to sustain for long. On the other hand it might be a result of the measurement process itself, with those who had been interviewed lulled into relative complacency by the thought that something (our research) was being done. Whatever the explanation, this finding underlines the importance of maintaining the salience of energy conservation as a topic for concern. Only then can the [illegible] and many real attempts to reduce energy consumption. But there is a paucity of information on the effectiveness of these attempts. The difficulties in converting the concern into vigorous action relate to a lack of understanding of the scientific principles involved.

The problem of energy conservation in universities is one of management, of communication and motivation—not of science or technology.

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Attacks on the heart from Rattigan of the Steppes

Anthony Quayle and Peggy Ashcroft as they appear in 'Old World' by Alexei Arbuzov

Stephen Pile assesses his work

Those who expect their modern Russian authors to be bearded, exiled and finger-wagging find Alexei Arbuzov a disappointment. Although he comes from Solzhenitsyn's Moscow, there is no hint of the KGB in the wings and except for odd references to a five-year plan his latest play could equally well have been set in Eastbourne.

British critics have been quick to pounce on the Soviet Union's most popular contemporary playwright and denounce him as a complacent sentimentalist who makes a healthy living from the happy fact that political reality is not his bag, while the intricacies of love, young or old, married or otherwise, most certainly are.

Yet to be set against this is the estimate of Richard Cottrell who earlier this year staged a highly successful trio of Arbuzov plays as the centrepiece of his first season as artistic director of the Bristol Old Vic: "I think it is pretentious and irrelevant to expect him to fit into political slots. No man who makes us laugh and cry can be complacent. He is a marvellous writer whose characters are people first and Soviet citizens second. He writes about what we all have in common, whatever differences politicians, diplomats and generals try to make us see in each other", he said.

While this may have been true at Bristol last March, it is sadly not so at the Aldwych now where *Old World*, Arbuzov's latest offering, will only confirm critics in their view of him as a weepy Terence Rattigan of the Steppes and as little likely to suffer for his beliefs as Robert Morley. Despite its Chekhovian overtones, combining surface humour with muted anguish [illegible] infectious relish for living and doing set the tone of a whole work. The all-enthusing Belyasnikov brings the same delighted concentration to creating puppet masterpieces as to eating a new sausage meat, while Lavrenty, the endearing assistant editor in *Evening Light*, plays regular Saturday football (and is generally sent off) until well into his 50s.

The equivalent in *Old World*, of course, is Lidya, an Eastern European trial of patience whose zest for living takes the form of waking people up at dawn to read them poetry and climbing out of dormitory windows at dusk to exult in nature. For some reason she thinks that standing in the rain without an umbrella is a sign of youthful vitality and she is, not surprisingly, the direct cause of both Rodion's heart attacks. She is not endearing; just plain tiresome.

As a detailed study of one relationship the new play looks threadbare alongside *The Promise*, Arbuzov's best known and humorous work, which tracks the fortunes of three friends, two men and a woman, as they grow up during the last war, learn the limits to what people may do to each other in love. The present sentimentality is effectively curbed by a weighty wartime detail.

Rodion and Lidya remain, has none of the subtle depth of the earlier play since their celebration is no more than a total of their past misery.

As a balance between the [illegible] and the sentimental, the dramatic tension in Arbuzov's world *Old World* has none of the subtlety of *Evening Light* which sees [illegible] away with an assistant editor his secretary falling in love and fighting to preserve a [illegible] from the incursions of [illegible] financial planners.

Unlike the three Bristol plays *World's* characters have neither the stoic cheerfulness which allows them to pick up their lives after defeat; with Rodion and Lidya there is always the possibility that they will become prisoners of that kind of depressive Gorkian household with whom one says, *so dread to be in bedroom*.

The new play is like Gorky in its insistence on demanding a very high quality of acting to flesh out the delicately atmospheric world created on paper. At Bristol, for instance, Michael Hordern was assigned on to play Rodion because it takes that magnitude of comic presence to make it work well.

Apologists for Arbuzov claim some justification for his work in a 1920s Soviet tradition of theatre peopled by lantern-jawed dramatis personae and leathers who after the [illegible] of inner struggles dumped into the [illegible] ciable, but distinctly counter-revolutionary girl friends for the sake of doctrinal purity and increased wheat output.

In these circumstances [illegible] achievement is [illegible] plays showing that Soviet citizens were ordinary souls with ordinary rather than political dilemmas, rather than a breed with a new morality to build a new society.

He learned his skills within the straitjacket of the Communist Party mitted of the Soviet Union, tenets that "writers must be passionate propagandists for the seven-year plan and energetic [illegible] nest, vigour and enthusiasm [illegible] hearts of man". On the face of it Arbuzov has lapsed into the [illegible] but he cannot be blamed for the ones for doing the latter [illegible] antly. In *Old World*, however, he does neither.

How psychology learns to cope with the boom

Psychology is bursting at the seams. The excess of qualified applicants over university places available reported in recent years by the Universities Central Council on Admissions is but the tip of the iceberg.

Not only are there many more people wanting to study psychology to degree level; there are also many more psychology graduates wishing to become professional psychologists than there are professional opportunities.

This is partly due to the lack of jobs, but there is also a tight bottleneck at the postgraduate training level. It is not uncommon for PhDs to be referred for professional training courses leading to MSc degrees in clinical psychology.

More want to study psychology at university and polytechnic level and increasingly more are taking it at A level. But pressure is not building up only along the traditional academic channels. Widely differing demands are being made of psychology as a service subject.

Doctors and nurses, lawyers, teachers, architects and planners, business managers, probation officers, social workers, speech therapists, personnel managers and communications engineers are some of the professionals who feel that a psychology course would be of use in their training programmes.

Not least, members of the "lay" public have an intense but largely unsatisfied desire to know more about psychology, fuelled by mass media interest in such aspects of applied psychology as intelligence testing, encounter groups, and parapsychology.

How is psychology teaching responding to these demands? In terms of syllabuses and methods within the higher education sector, the answer is slowly, if at all. Psychology as an undergraduate course has concentrated disproportionately on one part of psychology, traditionally known as experimental psychology, but more accurately described as human information-processing.

The objective of this area of study is to make lawful generalizations about the mental processes underlying such performances as attention, perception, memory, problem-solving, reasoning and language.

Although it is an academic discipline, psychology has a far broader scope than this. One might find academic psychologists inserting electrodes into rats' brains and observing the effects of stimulation of different areas on the rats' behaviour; or one might find them counting references to achievement in the children's stories of different countries in order to try to discover differences in the motivation to achieve as a function of different cultures.

But despite (or perhaps partly because of) this broad range of topic in a subject that spans the divide between biological and social science, academic psychology in Britain has traditionally tended to concentrate much of its resources on human information processing. Areas such as developmental psychology, social psychology, and personality form part of the syllabus, but usually a relatively small part.

Many of those involved in education are surprised about this. For example, first-year students have probably got over the stereotype of the psychologist as mind-reader or magician, and are aware that psychology claims to employ the orthodox scientific methods of observation and experiment.

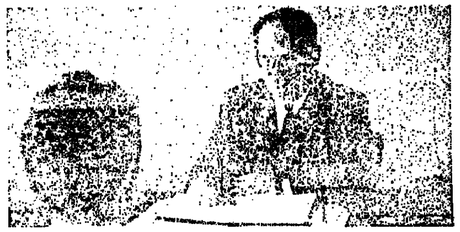
However, they do not understand why, granted this respectability, the syllabus should not reflect more of their own interests. They find the social, developmental, and personality areas of greater concern, and are surprised at the relative lack of resources devoted to them.

Moreover, students are questioning the philosophical assumptions underlying psychological orthodoxy. Their reading outside the syllabus has revealed that psychology is certainly not a unified science.

There are different approaches which make radically different assumptions about the nature of man and of science. Psychoanalysis, radical behaviourism, the ethological approach, and humanistic psychology use different methods, different technical languages, and above all, hold different views of man.

Students are not the only ones who are surprised by this situation. Other university departments, as well as outside organizations request help in solving research or training problems. They may be told that what they are asking for is not psychology; or that, yes, we have a social psychologist, but unfortunately he (or she) has all the social psychology training to do by himself and cannot afford the time for service teaching.

Research funding organizations are surprised by the absence of applications in areas of extreme practical and theoretical importance.



Applied and experimental psychology: probation officer and rat.

The mass media are confused because they have to go to sociologists to get material on topics they thought were psychology.

The roots of this confusion lie in certain practices in academic departments of psychology. Methodology is sometimes given more attention than content, the philosophical assumptions underpinning psychology are often ignored, and the implications of psychology for future societies are seldom touched upon.

Some university departments are admittedly recognizing the wind of change. The departments set up in the new universities, for example, have tended to recruit staff more evenly over the different areas of psychology. Others have perceived that psychology as a whole is too big a subject to hope to cover adequately to degree level; they have therefore set up courses specifically entitled social psychology or experimental psychology.

Others, notably polytechnics and colleges of education, have developed degree courses in which psychology is taught as an applied science in relation to other disciplines.

For a subject with human behaviour as its subject matter, psychology has been unimaginative in its teaching methods. It is disconcerting, for example, to find oneself lecturing about theories of learning and thinking which imply that one should not be lecturing.

However, group and individual work on projects have gained in popularity of late. So has the practice of using the group itself as the object of study.

Textbooks are also changing in response to changing demands on psychology teaching. In America, 65 firms, on examination showed nearly 50 per cent coming from eight firms.

An even greater degree of concentration showed in the analysis of union membership with two unions, the Amalgamated Union of Engineering Works and the General and Municipal Workers dominating. Together these two unions supplied over 50 per cent total response, the rest being spread over 16 other unions, and this in an area where most of the 100 or so affiliates of the TUC have membership.

The survey went on to ask about the types of activity the office of shop steward entailed and the time devoted to them. The following "league table" emerged:

Table 1

1 Taking grievances to management.
2 Bargaining.
3 Attending joint shop stewards meetings.
4 Explaining members' rights.
5 Passing on information from head office.
6 Reporting back from branch meetings.
7 Attending works safety meetings.
8 Taking grievances to convener.
9 Attending branch meetings.
10 Collecting dues.
11 Attending works canteen meetings.

It can be seen from this that involvement with management has the prime place and a further series of questions on "prior expectations from course" established that stewards wanted their courses to be of some immediate help in their trade union work.

Table 2 illustrates the stewards' expectations, and indicates their desire for an education which they consider relevant to their union function.

Table 2

1 Practice in bargaining.
2 Techniques of management.
3 Information about new legislation.
4 Greater knowledge of trade unionism.
5 To meet other stewards.
6 Wage/price data.

The survey asked for a post-course evaluation of the usefulness of its constituent parts to provide more precise information for future course planning. They rank as follows:

Table 3

1 Bargaining simulation exercise.
2 Work study.
3 New legislation.
4 Methods of communication.
5 Social security procedures.
6 Economics.
7 Visit to industrial tribunal.
8 Accounts analysis.
9 ACAS procedures.
10 Wage/price data sources.
11 Philosophy and theories of trade unionism.
12 Trade union history.

From table 3 we can again identify the pragmatic thread continuing through the steward's view of his role as the union bargainer on the shop floor with a need to understand management, management at their own game. Other wider, more, items like "Work study" and "Methods of communication" are preferred to ones which concern the history and philosophies of trade unionism.

This preference for courses which are of a straightforward training character is very much in line with the thinking and practice that the TUC education committee has been pursuing since it took over the work of the National Council of Labour Colleges in the 1960s.

It also represents a move away from the older tradition, which the NCLC as well as the WEA and the extramural departments represented, of a liberal arts type of education the aim of which was to give the trade union student a broad grounding that would stand him in good stead no matter what role he performs.

Those who put a question mark against the present direction of shop stewards' education are often themselves the products of the earlier system and they have therefore a particular axe to grind. Much earlier educational provision had a positive political content and prime criticism of the current work concerns the political character of the TUC courses. (In view of the widely propagated view of shop stewards as political militants the evidence of this survey is interesting in reflecting no demand for political education.)

What is probably of more concern in the longer term is the set of assumptions about the stewards' role which places such a high value on a pragmatic training course. It can be alleged that these restrict the view taken of his role, his relationships to his union, his industry and society at large.

Such questions apply both to the present working of industrial relations but also to wider issues currently faced in modern society. We have, for instance, the rush to employee participation, the problems of negotiating in the multinational company, the implications of incomes policy, employment policy, transport policy, and so on. All of these at some point impinge on shop floor industrial relations. It seems valid therefore to ask if the education for workplace representatives as currently provided is adequate to meet needs. It is doubly important that such questions be posed at this time in view of the likelihood that there will be an increase in these courses as a result of the provisions of the Employment Protection Act on paid leave for trade union representatives.

Indeed this Act and other recent legislation (and likely future developments) may well themselves bring fundamental changes in the job of the trade union representative. These will pose problems unless steps are taken soon to speed up the process of preparing trade unionists to play their allotted role within the new set up.

T. P. MacDermott
D. Bright
E. Lawrence

The authors are senior lecturer, lecturer and research assistant respectively in industrial relations at Newcastle Upon Tyne Polytechnic.

Practice before politics in trade union training

The important role played by shop stewards in British industrial relations can have escaped few people's attention in the widespread reporting of their activities, much of which is concerned with contentious episodes in which some stewards get themselves involved. What the media usually ignores is the daily round of bread-and-butter activities which the average steward carries out including the education and training facilities that exist to prepare him for these functions in a reasonable competent way.

Education and training are of growing importance within industry and the lack of information in this area is remarkable. This even extends to the Royal Commission under Lord Donovan (1965/68) of the shop steward, but skipped over the whole question of training in a couple of brief paragraphs. The late Commission on Industrial Relations in its report number 33 on industrial relations training talks in general terms of the need for shop steward training and on a more practical level contains a joint statement of intent by the Confederation of British Industry and the TUC.

All this may give the impression that not much has been done for the shop steward, when in fact a variety of programmes have been provided. Many of these have in the past been the result of activities by individual unions or companies, in the latter case stimulated by existing good relations between both sides.

The education and training input has come from a variety of sources of which the Workers Educational Association, some of the adult education departments, the Industrial Society and similar bodies were important in the pioneering days. In more recent times the TUC has stepped up its activities in the field and, mainly through its regional education offices, has now developed a quite considerable programme, still using some of the bodies mentioned above for teaching. Its main support in the teaching field has, however, come from the local authority colleges of further education and the polytechnics, most of which now make some provision for shop steward education.

One such centre providing a regular course for the TUC is Newcastle upon Tyne Polytechnic and to find out more about the students, their educational needs and the relevance of the courses to them, a questionnaire survey was undertaken there in the autumn of 1975. At a later stage the survey was extended to include students from three other colleges in the region. In all 108 students on polytechnic courses were circulated and 317 students on other college courses. The response rate was 62 per cent for the former and 63 per cent for the latter.

The first result of note came from the narrow spread of respondents over employment and trade unions. The polytechnic sample was found to spread over only 19 firms, one being responsible for 21.9 per cent of the sample. The second sample of students, although spread over

The important role played by shop stewards in British industrial relations can have escaped few people's attention in the widespread reporting of their activities, much of which is concerned with contentious episodes in which some stewards get themselves involved. What the media usually ignores is the daily round of bread-and-butter activities which the average steward carries out including the education and training facilities that exist to prepare him for these functions in a reasonable competent way.

The Times Higher Education Supplement (London) Room 541
Tel. (202) 638 6765 National Press Building
Washington D.C.

World scientists set up *genetic vetting body*

A new international committee to monitor recombinant DNA research and enforce universally accepted safeguards has been set up after a meeting in Washington of the International Council of Scientific Unions (ICSU).

The committee replaces an ad hoc body set up last year after serious concern about genetic engineering had been expressed by scientists throughout the world. It aims to monitor governmental regulations in this field, keep public opinion informed, harmonize national guidelines to ensure proper safety measures and act as a forum for discussion and scientific exchanges in recombinant DNA research.

One of the committee's purposes will be "to take note of the widespread concern over the possible deliberate or inadvertent dispersal of agents constructed by recombinant DNA techniques, to be vigilant regarding such possibilities and to attempt to foster public discussion of these situations should they arise".

A central archive will be established to store information on sources of technical advice, equipment, enzymes, host vector systems and so on. The committee will also "establish a worldwide registry of laboratories engaged in DNA research.

The new body in no way aims to prevent DNA research. Indeed, it will promote the training of biologists in the techniques, creating opportunities for those who do not have access to training programmes at national or regional level.

The new permanent committee, joining the dozens already established, owes much to the efforts of Sir John Kendrew, the British Secretary-General of ICSU. The three-day conference of ICSU, its 16th general assembly, was held in the National Academy of Sciences, and also adopted resolutions dealing with the free migration of scientists, Chinese participation and a proposal by the Royal Society to strengthen the scientific underpinning of agriculture and food production in the world.

Since 1963 ICSU has had a committee on the free circulation of scientists. This hears complaints about countries denying visas to delegates to scientific conferences, and does a lot of quiet, successful lobbying. This year it reported the lowest number ever of scientists kept out of countries—all three Cubans invited to the Washington meeting, for example, were granted American visas.

But migration is more difficult, and the standing committee on this set up after the Helsinki conference on European security and cooperation seemed directed particularly at the Soviet Union and its attitude towards Jewish scientists wishing to emigrate to Israel.

ICSU therefore decided to expand the committee on migration into a committee on safeguarding the pursuit of science. This broadened the scope: not only Soviet Jews, but South American scientists in jail and abuses of human rights are now included. The new committee will document and analyse individual cases, fight restrictions on the "healthy development" of science and study the brain drain from developing countries.

But, as Sir John Kendrew said, it will be a "hell of a job": ICSU has no power apart from moral persuasion and is not allowed to become political. No cases have yet been submitted to the new body.

The question of Chinese participation arose after a meeting in Australia of the International Geological Congress—a body not affiliated with ICSU. The congress invited the People's Republic, but not Taiwan. The congress met at the same time as the more recently established ICSU-affiliated Geological Union, and the effect was to bar Taiwan from this meeting also.

The Washington meeting adopted a delicately phrased resolution on the universality of science intended to encourage full participation of the People's Republic while not excluding Taiwan. It recommends "that the scientific unions of ICSU provide for adherence, through appropriate institutions, by scientific communities which effectively represent independent scientific activity in a definite territory provided they can be listed under a name that will avoid any misunderstanding about the territory represented".

Toronto calls for checks on standards of school-leavers

The University of Toronto, with 45,000 students, the largest in Canada, is so worried by the uneven grade [illegible] in high school [illegible] ask force has just recommended a proficiency test in mathematics for some and a written essay for all candidates.

The committee's report says high school students' records are now virtually meaningless. So many optional courses have been introduced in Ontario high schools that it is impossible to know what they represent. With the abolition of provincial school-leaving examinations there is now no common standard against which to measure pupils' performance; and the rate of "grade inflation" has varied from school to school.

The report therefore suggests an entrance examination, which would account for up to 40 per cent of the "index" ranking candidates. At the same time the Ministry of Education is urged to establish a single grading scale for marks in grade 13—the final year in high [illegible] Ontario universities [illegible] fulling that, by the University of Toronto alone.

The university made "impassioned pleas" to the committee for a return to basics, urging that all applicants should have passed specified subjects says the report.

The report, now being discussed by the university, will probably be adopted, although not enforced for at least two years.

The significance of the recommendations, coming as they do from Canada's largest university, and one of the most influential, is profound. They clearly articulate the growing disenchantment in Canadian academic circles with the "liberal" reforms in education in the late 1960s and the mounting worry over academic standards. Other universities may now follow suit.

The Massachusetts Institute of Technology is developing innovative courses in the humanities

Bridging the two cultures gap

Some of the most innovative programmes in the field of humanities are currently being developed at an institution famous for its technical and scientific achievements—the Massachusetts Institute of Technology.

This term MIT has engaged five distinguished professors, who have given up posts at Yale, Amherst, Harvard and Princeton, to become unattached members of the relatively small school of humanities.

Their job will be to map out areas of intellectual concern different from the traditional humanities divisions. They then will determine what new courses in these fields should be offered, what literature is needed and what areas of research are relevant.

MIT has in mind questions such as the responsibility of science, the study of ancient materials, the issues surrounding car safety or cosmetic surgery—any area of study at the interface of humanities, science and technology.

Humanities have had a chequered history at MIT. Shortly after the institute was founded, a philosophy department was established in the 1870s; this did not seem strange, as the first generation regarded MIT more as a place for a "modern education than as a strictly technological institution. From the outset it taught English and foreign languages, but little else in the traditional arts field.

By the 1930s the emphasis was firmly on the scientific approach. The division of humanities was founded in 1932; and after the Second World War the social sciences came into their own. Economics and political science became major departments; linguistics—introduced because of research into suitable computer language—has built up a world reputation under Professor Noam Chomsky.

A MIT committee recommended in 1949 that all undergraduates should do a year of western civilization and one course a term in humanities and social science. It was expected that humanities would blossom in the 1960s as social sciences had earlier.

The blossoming was sudden and short-lived. Student activism in the late 60s pushed enrolment in humanities up by 50 per cent and then almost as quickly it declined by 50 per cent (leaving a slightly smaller student enrolment than in 1964). The course in western civilization never took root, and was dropped. Most of the best teachers in the humanities left.

But now three new demands have encouraged a completely fresh initiative. The first is the sudden rise in the number of science-oriented students who have a simultaneous commitment to traditional humanities.

Massachusetts Institute of Technology

Music is now flourishing at the Institute. The number of students has tripled in the past 10 years, the orchestra is strong and there is much interest in experimental musical composition. Creative writing is also in demand, and many students have voluntarily enrolled in a programme to strengthen their ability to communicate.

The second demand came from humanists concerned about broader issues. There is a feeling at the institute that the present educational system has done poorly in looking at these questions in terms of society we now have. The ancient Greeks explored them in concrete ancient Greek terms, such questions as: "How do you get human institutions?" had not been explored, because there seemed little interest. The [illegible] had to be invented; the field had to be opened up.

The final demand came from the technological and scientific [illegible] within MIT. Engineers, [illegible] have to have a knowledge of economics. The new emphasis on directing research of different departments round such broad topics as energy, cities, transport, research, as MIT is now doing—needs to be the humanities. Already MIT has a host of courses on such topics as "value, choice and risk in science technology." More are needed.

The three demands are the [illegible] work in which the professors [illegible] work—radical new proposals [illegible] not emerge for some time. But [illegible] is giving the word "humanities" a new dimension which may be [illegible] significant than all the permutations of history and languages which worked out elsewhere in traditional schools of humanities.

'Disillusion with tutors' is postgraduates' main problem

Graduate students are often deeply disappointed in their teachers, and suffer from loneliness, anxiety and alienation, according to a two-year survey just published by a California research institute.

Many regard their relations with their professors as the most important part of their education, but they also report that this is the single most disappointing aspect of their graduate experience.

The study, directed by Dr Joseph Katz, professor of human development at the State University of New York at Stony Brook, and Dr Rodney Hartnett, a research psychologist at the Educational Testing Service, found that though postgraduate education had achieved much in the past 100 years, there were still formidable problems.

The study was based on interviews conducted in the Berkeley area and on questionnaires returned by 700 graduates at four American universities.

Among the other findings were:

The very training that graduate students receive is likely to make them less fit to be good teachers of undergraduates;

Women are still discriminated against in graduate [illegible] lead to education of formerly [illegible] research areas.

Departmental reputation is not necessarily synonymous; with departmental quality. Extended definitions of quality and of how it is to be measured are necessary;

Conditions crucial to the development of productive scholars and scientists are neglected in graduate education, among them the cultivation of the imaginative capacity, encouragement of cooperative inquiry, and discouragement of undue allegiance to a specific "school of thought".

Several of these criticisms of graduate education have, of course been heard often before. But the report emphasizes afresh how psychologically and emotionally damaging some of the disappointments are.

To improve the situation the authors suggest:

Increasing the amount of information about graduate and professional programmes available to prospective students;

Bringing the supply of graduates more into line with the demand for their services "to avoid the creation of a high-class intellectual proletariat";

Encouraging graduate professors to learn more about their students;

Setting more specific limits to the number of years students spend in graduate training and providing more opportunities for post-doctoral "apprentice" years; [illegible] teaching a real part of graduate training.

The study was done at the Wright Institute, a private research body which concentrates on studies in promoting social change. It is being published under the title: *Scholars in the Making: the Development of Graduate and Professional Students* by Ballinger Publishing Co., Cambridge, Mass. 02138.

Laval strike talks reopen

The strike of teachers at Laval University has now entered its eighth week, and the entire university in Quebec City remains closed. Negotiations have begun again, but no solution has yet been found.

At issue is the question of the power of the administration to determine new academic appointments, and the wish of the academic staff that departments should have a voice in university governance.

A strike fund has been started, which now totals $250,000 — mainly in contributions from teachers in other universities in the province of Quebec. The teachers can therefore hold out for some time yet, though the longer the strike lasts the more difficult it will be to catch up on the academic schedule.

One to one tuition ... Saudi-style

What is probably the world's most expensive open university experiment has begun at the University of Houston. It is a special intensive one-year course in psychology for Princess Rima, niece of King Faisal of Saudi Arabia. She began her studies last week.

It is no ordinary course. The Saudi royal family was very reluctant to allow an 18-year-old married princess to mix with uncharaperoned in the hands of a male tutor of higher education. Any idea that she could join the 6,000 other women now attending American colleges was quickly suppressed.

But Princess Rima was persuaded, and last spring her father turned to a rich Texan oilman for help. He managed to negotiate a special package with Houston, which has adapted its open university course modelled on Britain's Open University, to the demands and requirements of Saudi royalty.

Two lecturers, books, films, tapes and other educational aids have been flown out to the oil magnate's living quarters in the palace in Riyadh. As instruction will take place in the women's quarters, Saudis insisted on women teachers.

They will be provided with [illegible] off the palace grounds [illegible] hours, since women are [illegible] to drive cars in Saudi Arabia.

The princess's programme includes English, humanities, biology and literature, for which she can earn up to 31 hours credit. The contract, whose cost has not been revealed, is renewable next [illegible]

No joy for gays

Stanford University has refused to administer a proposed special scholarship fund for homosexual students. The offer was made to the university by the Gay People's Union.

Stanford has gone further than most in giving commitment to equality, not discriminate against homosexuals or allow firms to recruiting on its campus to do so. Giving any such "affirmative action" as a scholarship fund would clearly be embarrassing.

France

Year begins amid threats of widespread unrest

from Guy Neave

PARIS

Last week 825,000 students returned to higher education—2 per cent more than in the academic year 1975-76. More students are choosing to continue their studies rather than risk the hazards of an uncertain labour market. Yet an examination of this year's subject choice shows interesting trends. The rush into pharmacy seems to have dropped away. In Paris, for example, enrolments have fallen by 10 per cent in this subject. While medicine and sciences appear to have flattened out, the humanities have still managed to increase their numbers. In Paris, 124,850 students will enrole in humanities courses compared with 111,981 last academic session.

Increase in enrolment or no, the university term has got under way on a somewhat sour note. There is, for instance, the problem of examinations interrupted by the student strikes and disruptions of last spring over the reforms of the second cycle of studies. Some students returned to sit for them in September. Others are already attending lectures to make up for lost credits, without which admission to certain second and third year courses is barred.

The students return to a university sector locked in battle with Mme Alice Saunier-Seité, Secretary of State for Higher Education. It is an unenviable, often contradictory and certainly a most ungallant spectacle. Alternatively accused of heedless authoritarianism by some, of timidity by others, Mme Saunier-Seité is seen as lacking in initiative by others. To some hers is a policy of outrageous conservatism bent on subordinating academia to the brutal vocationalism of industry. To others, she has no policy at all. No academic year—not even 1968-9—has opened in such an uneasy atmosphere.

It is scarcely surprising, therefore, that an olive branch was warmly held out by the Secretary of State has been received with no great enthusiasm. Laying the proposed university budget for 1977 before the Cultural Affairs Committee of the National Assembly, Mme Saunier-Seité hinted at the possibility next year of a 20-25 per cent increase in the allocation of "complementary hours".

"Complementary hours" is a centrally controlled system by which payment is made to universities on the basis of a certain number of hours allocated per subject. It is by this means that many part-time staff are paid. This year's massive reductions in complementary hours brought strong protests from both the universities and University Institutes of Technology (IUT). The latter, which began in 1966, provide short, two-year courses in applied and technological studies.

In her speech, Mme Saunier-Seité said that the IUTs should pay more attention to the economic and social needs of their regions. They should also employ more staff with industrial experience.

To this end, 1,450 new posts are to be created over the four years starting in October, 1977. A certain degree of "redeployment" will take place in higher education. It remains to be seen which establishments and which areas of study will feel the chill wind of this proposal.

The promise of more money for some next academic year has done little to quell the uproar. Earlier this month the administration of the University of Paris 5—which has 3,000 students specializing in medical studies—decided unanimously to suspend teaching for a week. This followed a reduction of 44 per cent in the number of complementary hours asked for by the university. Nor, despite the relatively favourable treatment envisaged for the IUTs, has their reaction been any the less fierce.

At Rouen, the director of the local IUT resigned in protest at this year's cuts—an example followed by the academic council of the IUT at Grenoble. Even as the Secretary of State presented her budgetary proposals at the committee stage, a meeting called by the Socialist Party to discuss the position of the IUTs brought together 20 out of a total 58 directors.

Such reaction was predictable. More unusual has been the attitude of the governing councils of the IUTs. Composed of teachers, administrators and local industrialists, they recently called on Mme Saunier-Seité to protect the IUTs from hasty and ill-considered decisions of her department.

Norway

Experimental polys said to be 'apeing universities'

from Mike Duckenfield

STOCKHOLM

Fears that the regional college alternatives to traditional degree-oriented higher studies are becoming second-class universities have been voiced in a report by the Science and Humanities Research Council.

The 160-page report by the council's Institute for Studies in Research and Higher Education says that, [illegible] student recruitment, enrolments, curriculum design and research point to an "academic drift" similar to that experienced by Britain's polytechnics.

It criticizes the colleges of which eight of the projected 17 are now open, for not fulfilling their promise as mainly short-cycle, vocationally-oriented institutions closely tied to local communities and giving priority to inter-disciplinary and recurrent education.

The colleges, first launched experimentally in 1969, were designed as city courses and mainly two-year vocational courses. The university courses carry credit points enabling later transfer to degree courses at the universities.

Established partly to promote decentralization and partly to relieve pressure on the universities following the near trebling of student numbers during the 1960s, the colleges currently have about 4,000 students. However, they are expected to account for the bulk of the 25,000 new places in higher education to be created during the next 15 years.

The report argues that the government's failure to make clear how the balance between relieving the universities and offering an alternative can be achieved has been aggravated by decentralization and the desire to give the colleges extensive autonomy. The result has been the drift to university status.

On research, no directive was given by the government and this has led to the colleges opting for general and national projects rather than applied and regional ones. Only 25 per cent of projects have been on applied subjects and 57 per cent have been unrelated to the regions.

It is also argued that the colleges were set up too hastily to avoid employing existing solutions to the problem of staff recruitment—despite the original intention of encouraging an influx of teachers from industry and the professions.

While there has been a substantial use of part-time teachers, mobility between the colleges and industry and the professions has not occurred in the form of short-term, full-time appointments.

Although the colleges were intended as a boost to recurrent education, only 14 per cent of students in 1974 were on part-time courses.

The eighth college opened this autumn at Alta in Finnmark, Norway's most northerly county. The ninth, at Moss, south-east of Oslo, will open next year. After that one a year is expected to open until the network is complete in the mid-1980s.

Campus in search of an identity

John Horgan reports from Limerick on Ireland's controversy-dogged technological showpiece that wanted to be a university

LIMERICK

The Republic's National Institute of Higher Education in Limerick—designed to be a pacemaker for technological education at third level throughout the county when it was first opened in 1972—began its fifth year last month battered by almost eight months of continuous controversy and with no more than 70 per cent of its projected total enrolment for this stage of its development.

This gloomy picture, however, is not the complete one: most of the problems have now been or are being solved, and the institute is looking forward both to a new relationship with the Department of Education via the Higher Education Authority and to the eventual appearance of a Higher Education Bill, which will give it an authentic statutory basis for its operations instead of the ad-hoc arrangements under which it has functioned since its inception. But for the director, Dr Edward Walsh, and his staff, it has been a difficult and a protracted birth.

Even the circumstances surrounding the original decision to set up the institute were controversial. Vocal spokesmen for local interests in Limerick, the Republic's third largest city, had been demanding a university of their own for years. They were not visibly mollified when they were told by Dublin that the NIHE would be "better than a university".

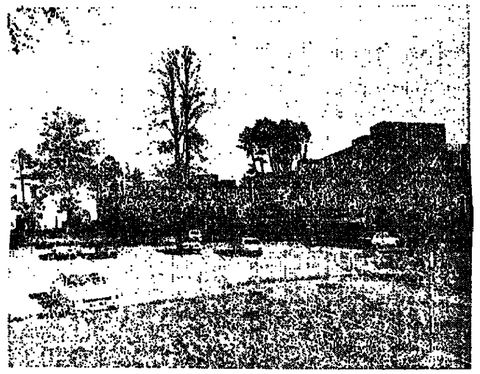
Mr Richard Burke, Minister for Education, once created a minor sensation by telling a press conference that he saw no reason why the NIHE should not eventually achieve the status of a full university. Some time afterwards he had to back a Cabinet decision which tied the NIHE firmly to the apron-strings of University College, Cork, as a "recognized college": at that stage the progression to university status was reduced to the rank of a fail-safe procedure, to be activated only if the university showed itself unwilling or unable to take the technological ethos into consideration.

Academically, the NIHE originally came within the orbit of the National Council for Educational Awards, which in fact validated the first NIHE degrees last year. But a series of government decisions stripping the NCEA of its functions in relation to degree-level studies paved the way for this year's chaos.

The academic authorities at UCC, asked this March to validate several degree-level courses, did not like what they found and insisted on changes. Students at the NIHE protested fiercely at what they felt was an attempt to downgrade the technological sector, burnt their matriculation forms, and even at one stage barricaded members of their own Governing Body into their boardroom for several hours.

After that applications from prospective students, which had been running substantially above the previous year's figure, took a nosedive from which they only barely recovered to reach last year's levels. It is not this, however, but Department of Education spending restrictions which has resulted in this year's low enrolment. Instead of a projected 1,100 students, there are only 700; and the NIHE must be unique among higher educational institutions in having some 40 vacant individual offices for the staff who would have otherwise been recruited to teach them.

Dr Walsh: confident



The National Institute of Higher Education: losing the 'apron string' image

Dr Walsh points out that the fact that there were problems in one or two of the course areas had hardly been news to him or the staff concerned: they had been frank with the university authorities about these. But some newspaper coverage, he says, turned what should have been a normal process of re-assessment and adjustment into a nightmare of charges and counter-charges which seriously affected NIHE morale.

One of the problems was the willingness of the university to recognize certain graduates who had done a four-year course as honours material—despite the fact that most Irish universities still award a three-year honours degree. This has been solved by a compromise which will allow successful candidates honours as an additional term's reading—with no residence requirement—and the appropriate extra examination.

More significantly, perhaps, the NIHE relationship with UCC is being terminated, and it is embarking on a new one as associated college of University College, Galway. This already seems to have got off to a good start and is enhanced by a high degree of mutual understanding.

Course structure and enrolment patterns in the NIHE provide a graphic illustration of the problems confronting any third-level innovation in the Republic, especially in the technological sector. Not least of the problems is the pronounced academic bias at second level which is still exactly the obverse of contemporary British and European trends. "Europe" was in fact chosen as a basic theme by the NIHE in 1972.

The five main interdisciplinary areas—for which an attractive and successful module system has been developed—are engineering, electronics, administrative systems, business studies and European studies. Engineering, where the employment record of graduates last year ran at 100 per cent, is by no means as popular as business studies or even European studies among prospective students. The comparative unpopularity of administrative systems is put down by the NIHE authorities to a widespread ignorance of the employment potential.

Again, a massive 77 per cent of this year's intake come from the academic secondary schools, and only 8 per cent from the vocational schools, the latter gravitating markedly towards the engineering area. Only a few students have so far come into the NIHE from the regional technical colleges—for which the NIHE was originally seen as a natural "top"—but the quality of these entrants has been good. Some 38 per cent of the intake are on grants or scholarships, which is slightly above the comparable university figure.

Dr Walsh sees the future development of the NIHE as being more in terms of providing new courses (for which the modular system is peculiarly adaptable) than in indefinitely expanding the existing ones. In addition, he is thinking of breaking new ground in the certificate and post-graduate areas.

In relation to the former, where the NIHE qualifications will continue to be validated by the NCEA, considerable progress has been made in certificates in electronics, computer engineering and social work. At post-graduate level, he sees a compelling need to do something for the hundreds of people who are leaving universities with arts degrees, a substantial potential and undeservedly low employability.

He has also begun an exciting experiment linking the NIHE engineering and industrial area with the National College of Art and Design in Dublin in a joint degree-level course which will involve students living in Limerick as well as in Dublin for part of their course.

Dr Walsh is not dismayed by the hullabaloo of the past year which has, he says, delayed rather than compromised the NIHE's development. It is already probably the most highly capitalized third level institution in the Republic, thanks in large part to substantial World Bank loan funding. It boasts some equipment—including, for example, an electron microscope—which any Irish university would give its eye teeth for. Its engineering areas, designed by the same team which built many factories for the Republic's Industrial Development Authority, are replete with production systems in miniature, from shop floor to upper administrative level.

Options being canvassed at the moment include possible degree work in energy technology, in chemical technology and in environmental engineering. As well as this, the NIHE has, together with the banking sector, for example, developed a number of self-funding programmes in the administrative systems sector.

It also has a substantial potential for the construction industry, but this must await rationalization between the NIHE and the technological college near by run by the Limerick Vocational Educational Committee at Moylish, eventually all third-level work in this area will be done on one campus.

The communications problem between the NIHE hierarchy and the Department of Education, especially over funding and staff appointments, have undoubtedly led to problems of staff morale, but Dr Walsh is confident that the new arrangement, under which his funding will be routed via the HEA, will improve matters.

It is, however, possible that preferential funding may be more difficult to argue against the universities, who are also under the HEA umbrella, and that the HEA may insist on fairly stringent rationalization of capital investment. The same sort of effect may make it difficult for the NIHE to reduce its staff-student ratio from its present 15:1 to a hoped-for 12:1.

If the last year has seen a certain polarization about the NIHE, its director is confident: "The polarization is, quite simply, between those who have been put off by all the bad publicity, and those who have experienced the NIHE for themselves, or whose friends or relatives have proved its worth for them", he says.

TIMES PAST THE TIMES

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How to help industry

Lord Crowther Hunt, the Isaiah of manpower planning, was easy to reject and even to ridicule. It is more difficult to dismiss so lightly the message of that avuncular Mosiah, Mr Callaghan. Of course, the Prime Minister's criticism of the shortcomings of education, and of higher education, was not expressed in the naive and even gauche terms employed by Lord Crowther Hunt. That, after all, is the difference *between someone plucked from the common rooms of Oxford and someone who has spent a generation in the hardy pursuit of politics.* But his implied message was, if anything, more direct and less congenial to educators (and to socialists?). Universities, colleges, and schools have failed the nation by not producing the graduates and school-leavers required by productive industry and by inculcating a distaste for its values, in particular for the profit motive. So they must share some of the responsibility for our comparative, national decline.

The two charges are often confusingly combined but must be answered separately. It may be true that the experience of higher education has bred in some graduates a reluctance to make a career in private industry. Many working in polytechnics and universities, particularly the former colleges of advanced technology, would of course deny this stoutly. They would point to the rapid expansion of courses in management and business studies, and the continuing commitment to industrial practice in the bulk of engineering and similar departments.

But even if the charge is true, it is hardly more than a reflection of the discreet contempt that the dominant classes in British society traditionally have felt for "trade" for two centuries or more. It would be surprising if institutions of higher education had not been infected by these sentiments, particularly as they so often serve as the ladder up which aspiring members of the working class climb. A slightly aloof attitude to "trade" may indeed be a defining characteristic of this embourgeoisement.

Too much consideration of these broad, quasi-philosophical issues is probably vain. Much more to the point is the other downright charge that higher education is failing to produce the graduates that productive industry needs. Here the case is at the best not proven. There is simply no evidence that industry has a large number of vacancies for scientists and technologists at present. Indeed the admittedly large influx of graduates into public employment in recent years was to a very considerable extent made inevitable by the inability of a depressed private economy to employ them.

Many argue that the difficulty is caused not by the quantity of graduates seeking careers in industry—which is nearly satisfactory—but by their quality—which is much less so. One suggestion to improve *their quality is to offer students studying science, and particularly technology, higher grants in the hope that more able sixth-formers* will be attracted to these subjects. In present circumstances this would not work for at least four reasons: universities and polytechnics are already scraping the barrel of acceptable applicants in these subjects; there is no supply of able sixth-formers studying the appropriate A levels to be attracted by differential grants; differential grants would introduce a new and entirely unproductive divisiveness into higher education; and there is absolutely no guarantee that the increased number of scientists and technologists would find it easy to obtain satisfactory jobs when they graduated.

Differential grants would do nothing to improve relations between higher education and industry. They would be much more likely to make them worse. Nor will a judicious mixture of patriotic appeals and not-so-subtle threats from the Government have much effect. A much more positive and thorough policy is necessary. The Government should consider urgently whether it is possible to enhance the existing centres of excellence in scientific and technological education, perhaps by allowing them more generous funds, and to create new ones. *Specialized institutions, such as Cranfield or* the London and Manchester Business Schools, occupy too peripheral a place in British higher education. The contrast with the pattern of higher education in France, or the Soviet Union, is striking. There, there is not the same distaste for specialization. Without going to the monotechnic extremes of these two countries, there is scope for a concentration of excellence in science and technology which would not only enhance the skills of graduates in these subjects but raise the status of the institutions in which they were educated—to the mutual benefit of higher education and industry.

The crisis of science research

The past few years have not been kind to the Science Research Council. A concerted attempt to shift its priorities from pure to applied science has coincided with increasing cutbacks in Government expenditure, and cost-cutting moves towards international collaboration in international scientific projects have only compounded its financial problems as the value of the pound has declined.

Further cuts in the SRC's budget no longer provoke either the headlines or the outcry that they did even a year ago. Yet there are now indications that the seriousness of the council's financial situation is casting doubt on its ability to sustain the role allotted to it by Parliament.

If the SRC is forced into a situation where it finds itself unable to honour its responsibilities—the possibility of having to renegotiate the treaties that determine our involvement in international organizations such as the European Organization for Nuclear Research (CERN) is also being discussed—then the failure will be one for which the Government is equally accountable.

In the light of the current financial situation, the council is not necessarily wrong in reducing its commitment to expensive areas of research such as high energy physics. Nor has science suffered unfairly compared to other areas of public expenditure. What can be questioned, however, is the extent to which the pressure of ever-increasing reductions in future expenditure are threatening, as some physicists have put it, to turn a disciplined withdrawal into a rout.

In many cases the decisions have been effectively taken out of the councils' hands. Thus Britain's future participation in CERN is now threatened by a Treasury decision about whether to provide the council with the full £5,750,000 supplementation required to cover the increase in subscription to international organization. Some time ago, the Treasury which vetoed Britain's participation in the 300 GeV project at CERN, a decision later reversed after the project had been reformulated.

The present situation therefore raises two fundamental issues about the way Britain runs its science, each of which needs to be faced directly.

The first is that the Government has a responsibility to ensure that further reductions to the science budget remain compatible with a rational research policy, and do not degenerate into a rag-bag of ad hoc measures of benefit to neither science nor the community. Scientific policy [illegible] Treasury but in the [illegible] responsible public [illegible] with the [illegible] of the scientific [illegible]

LETTERS TO THE EDITOR

Paying for research

from Mr Michael Locke

Sir,—Brian Salter (*THES*, October 1) and Daphne Johnson (*THES*, October 15) have pointed out the too frequently ignored personal and managerial problems of the researcher on short term contracts. But consider also the effects of the forms of funding and employment on the kind of research which is undertaken in institutions of higher education.

I would be more concerned than Brian Salter with applied research, particularly in social policy and administration. Policymakers, managers and administrators need research which, whilst being technically and epistemologically reasonable, justifies itself primarily by its usefulness in informing and improving public institutions. Yet research which can be justified on these grounds, whether as monitoring or substance, has to be compromised with the demands of academic substance if the researchers themselves are to stay in work.

Social policy and administration needs research which can be done quickly to meet current events, which may be relatively low level academically and which may last weeks rather than years, and to do this there need to be teams of researchers with continuity and security of employment. Arrangements for research funding, however, act in an opposite direction.

The researcher, if he/she is to raise funds to stay in employment, is encouraged to concentrate on the academic and methodological content and to make projects last two or three years, even if they cannot be stretched longer. I would not necessarily suggest that researchers need the lifetime security of teachers in higher education but at least they need an open-ended career pattern such as that of other professional and executive jobs.

Yours,
MICHAEL LOCKE,
Research fellow,
North East London Polytechnic.

Scientology's view

from Mr Peter Thompson

Sir,—David Martin in a recent article on free thought and authoritarianism makes comments on various religions including the Church of Scientology.

Notwithstanding Professor Martin's erudite if somewhat convoluted reasoning, the historical reality is that "no culture in the history of the world save the thoroughly depraved and expiring ones has failed to affirm the existence of a supreme being . . . a government wishing to deprave its people to the point where they will accept the most perfidious and rotten acts abolishes first the concept of God". (L. Ron Hubbard).

I would suggest that the dialectics of authoritarianism are of minor importance compared to the necessity for establishing a correct identity for man as a spiritual being. This is what Professor Martin ignores and why his article brings us no nearer a resolution of the problems of the human spirit.

Yours sincerely,
PETER THOMPSON,
Director of Public Affairs,
Church of Scientology.

Poly student housing

from Mrs Shirley Meredeen

Sir,—As difficult as is the student housing position for universities (*THES*, October 22), those attending polytechnic suffer in this respect, as in many others, far worse.

Polytechnics, responsible to different local authorities, have widely different housing policies and few even have a commitment to assistance with student housing but simply provide a one-man accommodation office which can provide no more than a face-saving service. They fail to consider resources for student housing as a necessary part of the total resources of the educational institution, thus blinding themselves to the undoubted connexion between low recruitment where residential places do not exist and academic failure due to poor housing.

[illegible] Anchorite has recommended to its five polytechnics a target of 15 per cent residential places by 1981. Not all of the HEA polytechnics have even agreed to this limited goal yet.

If Mr Callaghan wishes to encourage more science, vocational and technology students, then he might consider the almost non-existent housing aid to polytechnic students as an area worth developing in the total educational package. The housing of students should not be an afterthought. It is integral to all educational planning.

Polytechnics are the poor cousins of the educational system. When it comes to the provision of student housing by polytechnics, we are in the area of the Third World.

Yours,
SHIRLEY MEREDEEN,
Accommodation officer,
Polytechnic of North London.

British teachers in Zambia

from Mr Stephen P. Mwanza

Sir,—It was reassuring to read in the budget of Mr Pres[illegible] Ministry of Overseas Development has not been affected by undue reduction but I am wondering if it is not time for it to revise its policies in respect of British teachers serving in developing countries such as Zambia.

Twelve years ago the phenomenal expansion of secondary education in this country made imperative the recruiting of British teachers, for whom the Ministry of Overseas Development paid substantial salary supplements. Today there is an adequate supply of secondary school teachers in Zambia, particularly in history, geography, and English.

What this country needs, however, is a supply of highly qualified technicians and university lecturers. The pressure of teachers with nothing more than a first degree or a teacher's diploma is hardly needed for the following reasons.

First their qualifications (first degree with or without Teacher's diploma) hardly adequate for lecturers in teachers' colleges earning a local salary of K5,130 (approximately £4,000 per annum) plus a housing supplement of £4,000 per annum, paid leave, children's education allowances and a 25 per cent gratuity at the end of a three-year contract. The total emoluments earned by such a teacher is in the region of £10,000, which is more than the salary of a university professor in Britain.

Secondly, as such high salaries encourage the removal of contracts and also protracted pressure on such teachers (many of them citizens of the Irish Republic) the opportunity of promotion to senior posts for Zambians with the same or even better qualifications is minimal. The fact that the expatriate total emoluments are nearly five times those of a Zambian can hardly encourage a good relationship in a professional level.

If the Ministry of Overseas Development is really interested in helping developing countries like Zambia, the obvious solution is to discontinue the subsidy paid to British teachers (the local salary is quite adequate) and use the average £4,000 spent in salary subsidy to fund a training scheme of post-graduate work for graduate Zambian teachers. The amount spent in one year's subsidy (approximately £4,000) is quite adequate to support study in Britain for a Zambian working on a MA or MEd degree.

In this way the Ministry of Overseas Development will help in achieving the Zambianization of education and maintain at the same time a *permanent* link of educational cooperation with Zambia—something that the expatriate teacher will never be able to do as his presence in the country is only a temporary one.

Yours sincerely,
STEPHEN P. MWANSA,
Lecturer,
Moffat Teachers' College,
Serenje,
Zambia.

PM's homely remarks

from Mr H. D. Hughes

Sir,—Did your leader writer (*THES*, October 22) hear, or read, the Prime Minister's speech at Ruskin? The following were his remarks on literacy, which aroused no protest from any section of the audience:

"It is a commentary on the need that 55,000 students were receiving tuition this year with a steady flow of new students still coming forward. Perhaps most remarkable has been that 40,000 voluntary teachers have come forward to work, often on an individual, personal basis, with a single student.

"When I hear, as I do in so many different fields, of these generous responses to human need, I remain a confirmed optimist about our country. This is a most striking example of how the good will, energy and dedication of large numbers of private persons can be harnessed to the service of their fellows when the need and the opportunity are made plain."

What is "less sensitive" about that?

Yours sincerely,
H. D. HUGHES,
Chairman,
Adult Literacy Resource Agency.

Learning languages

from Mr Lewis Stratch

Sir,—Might the decline in language studies (*THES* October 8) stem from the same defects in the education system that in mathematics (the language of science) are restricting the entry, both in numbers and quality, to the applied scientific professions?

In all strict, practical arts extensive, continuous practice of the basic techniques is necessary before any student acquires sufficient understanding and competence to obtain much pleasure from the discipline, and do his innsired to want to penetrate further. It is absurd to expect most children to enjoy such exercises; only if the parental generation discharges its duty to guide them firmly through the induction phase will the majority be helped across the initial potential barrier, and develop the personal desire for knowledge—even at some personal inconvenience—that is essential for any advanced study.

Yet every trend in education today is directed against such intervention, and hence against the great middle band of students—those between the self-educating geniuses and the uneducably retarded—breaking through to make the most of their abilities and opportunities.

It is, indeed, disappointing that the Yellow Book and the Prime Minister have concentrated entirely on technical details, important though some of them are, and ignored the vital question of whether the ethos of the present system and the structures designed to accommodate it inhibit the development of the discipline and motivation on which all true learning, an essentially internal process, depends.

Yours faithfully,
G. L. STRETCH,
1 Manor Close,
Ashby-de-la-Zouch,
Leicestershire LE6 5EE.

Engineering *education*

from Mr C. A. Horn

Sir,—During the past weeks correspondence has taken place concerning the revision of engineering education. Many accept the need for four-year courses in this subject, but this is to be the case a thorough revision of aims is necessary. At the moment engineering education seems designed to do two things—to train competent technologists to maintain the production process and to produce technical advisers who can answer the questions of non-technical managers.

Any new scheme should produce technologists competent to be managers. In these circumstances some of the extra time should be devoted to management subjects. Technological education is far too important a subject to be left exclusively to the technologists.

Yours faithfully,
C. A. HORN,
Head of department of Management and Social Sciences,
Oxford Polytechnic.

More letters page 23

Universities need to nurture creative and critical elite

Perhaps there once was a time when universities were ivory towers. In modern industrialized societies ivory towers are out. Individuals and groups are so closely interrelated and distributed over so many overlapping institutions and organizations that none can be isolated and stand apart from the rest. Moreover the costs of knowledge transmission, let alone knowledge creation, are now so high that universities must draw the major part of their resources from the community, and for this reason too they must be responsive and responsible to the community in which they exist. But what limits may or should be set to this responsibility? If such limits can be identified, to what extent are they currently being observed, or are likely to continue to be so in the future?

The answer to the first question depends on the functions that one sees as being properly performed by the university as an institution in society. The answer to the second lies in the interplay between social trends and the stimuli and responses to them from universities. I propose summarily to postulate four functions for universities selected from a much larger set suggested by the Carnegie Commission on Higher Education in the United States and the French *Loi d'Orientation de l'Enseignement Supérieur* of November, 1968, then to identify some existing social trends which seem to me relevant to universities, and finally to look at the impact of these trends on the performance of the postulated functions.

The four functions I select are those: the provision of opportunities for the intellectual, aesthetic, ethical, and skill development of individuals; the transmission and advancement of knowledge, the critical evaluation of society for the sake of society's self-renewal, and the extension of man's ability to exercise greater control over his destiny.

The first social trend to which I would refer is the increasing dominance of the ideology of egalitarianism. From the notion that every individual is of equal worth to any other is derived the view that opportunity should be equal for all. But society, at least in Britain, denies this, whether because of gross inequality of social origins, or because of structures, institutional or doctrinal, which preserve or strengthen discrimination against, for instance, women or minority ethnic groups. Such structures (like, perhaps, the family) therefore need to be broken down, and inequality of origin should be corrected by positive discrimination in favour of the under-privileged. This logically entails discrimination against the privileged, whether that privilege is of wealth, or social origin, or intelligence. So in the ideology of egalitarianism *wealth* becomes a term of opprobrium, and this has profound implications for universities, and for society, and for the role of the former in the latter.

Second, modern technology. The explosion of knowledge disrupts the communication patterns of society. Most people's knowledge of everything is now superficial, in the sense that much deeper knowledge exists. A few will have expert knowledge in a narrow field, but they will be official level with experts in other fields, or with people who have no deep knowledge in any field. Thus social segmentation is increased, a sense of importance, and its companion apathy, is fostered, and in our egalitarian climate the response is to denigrate the expert.

A further contributor to social atomization is conditions of work. The tendency of the production line to require the repetitive performance of the same task, with no sense of making a contribution to, or participating in, the creation of a final product which affords satisfaction, leads to the dehumanization of labour, the destruction of any sense of achievement, and so the furthering of social and personal demoralization. When to these conditions of disrupted social communication, of sense of impotence and non-participation, of fragmented local communities, and of little or no job satisfaction, is added the decline of accepted social norms and of religious compensations, it is small matter for wonder that rights loom larger than duties, that mechanisms for the defence of rights, such as unions, grow in significance, and that such panaceas are sought as Bills of Rights—as if pieces of paper might master profound social malaise.

The third trend which seems to me relevant to my subject is political centralization. The close interdependence of activities in a modernized society generates pressures for centralized decision-making, for efficient working of the process requires an overview of the whole. But the very complexity which impels towards centralization imposes compartmentalization, for it cannot otherwise be handled.

So with centralization goes the growth of bureaucracies and organizations. The inertia which they can hardly help producing profoundly affects the capacity of the political machine to produce action. As Harry Truman is supposed to have said after Eisenhower's election to the Presidency: "Poor Ike: he will sit there, in his great big chair, and he will say 'Do this, Do that', and *nothing* will happen."

It is for reasons such as these that the more intelligent or idealistic among the young see something wrong with "the system". One can hardly pretend that they are wrong. They react by resisting its norms (of dress or deportment or sex or drugs or art), or by seeking to ameliorate its effects (by social service), or by refusing to sustain it by adding to its wealth, or by trying by direct action to overthrow it. Positive correlation between education and economic growth is by no means clearly established, but there can be little doubt that the substantial transfer of employment in the last two decades from productive industry to services (in which graduates have heavily participated) has had something to do with the low increase of Britain's GNP as compared with its competitors.

What is the impact on universities of trends such as these? The effect of the last is most evident and most immediate. For the last thirty-five years the rate of growth of the nation's demands has exceeded the rate of growth of its output. Unless productivity and output sharply increase, the nation's standard of living must be lowered, and in an egalitarian world universities are likely to be called on to carry more than their share of the reduction. With inescapable cost increases (salary rises, higher prices for essentials such as heat, light and maintenance, very large price increases for books and journals, more and more expensive equipment needed for advanced research) static cash limits imposed a severe enough decline: the UGC's latest circular implying a 4 per cent reduction in real terms in 1977-78 throws into even starker relief the effects of low economic growth.

Leaving aside the immediate problems (which for some institutions may be insurmountable) there appears to be a number of possible responses. Among these are a reduction in staff-student ratios, introduction of a four-term year, and replacing educators by educational technology.

There is no God-given ratio divergence from which would be needlessly extravagant or excessively damaging, and an appropriate ratio is likely to vary with teaching methods (about which we still know much too little), teaching aids, and from subject to subject. But there is certainly some point at which it would become impossible to maintain both the standard and the length of the three-year undergraduate degree, a shorter first-degree period than in almost every other major country.

The four-term year, much discussed a few years ago, was shown then to be effectively destructive of all major research, unless extra staff were employed and so savings were confined to more efficient use of capital resources. But even then a fourth term would have serious implications for postgraduate supervision and research, which of course continues through the summers (the laboratory sciences would be most crucially affected), and would abruptly curtail one of the growth activities of universities—the provision of usually short and intensive refresher or post-experience or "cooling-up" courses during the summer vacation. This too would have effects on society in holding back the already too slow process of innovation in productive enterprise.

In the longer term, however, it seems to me that straitened resources would impose a shift from labour-intensive education to capital-intensive instruction. Knowledge demands and makes possible even more complex, competent and expensive machinery. The knowledge explosion is reflected in the growing flood of published material. The UGC subcommittee's notion of the "self-renewing" library and the Computer Board's concentration on regional computing centres and linked networks surely foreshadow computerized information retrieval systems, visual display on such matters, so professionalized administration grows, and senior officers of the university are not only increasingly seen as being remote and separate, but in fact have to devote excessive attention to these management problems at the expense of the academic leadership which they should properly give. The participating role of the academic in the government of his institution reduces towards zero, so he becomes frustrated or withdrawn, and the social cohension of the community is further undermined.

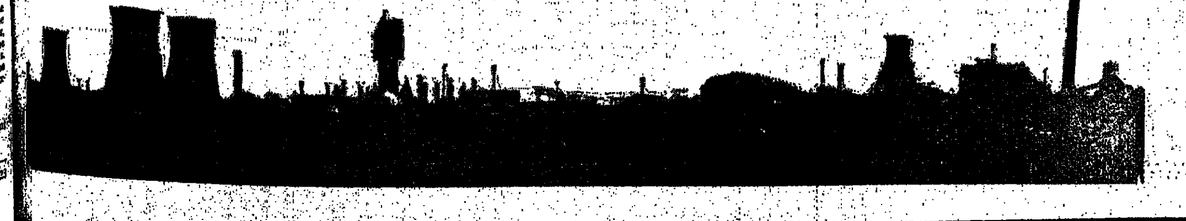
What becomes of the functions of universities? The pressure of the society paymaster for useful cognitive packages will ensure the continued provision of opportunities for individuals to develop skills, but may leave less room for the intellectual, the aesthetic and the ethical—which are likely to be further placed at risk by internal changes within institutions. Pressure on resources may well make transmission of knowledge more cost-effective, but that which is transmitted is likely to relate more to the performance of known tasks than to understanding the methods of devising solutions to as yet unknown problems, or to the creative imagining of what are the questions that need to be asked. The mounting costs of research are likely to place it out of reach of more than a few favoured institutions, or a few favoured sectors within institutions.

All of this would be of unmeasurable consequence not only for universities but for society. It is the last two functions that I listed, however, which seem to me most vital. A prime characteristic of so-called developed societies is a seeming inexorable advance in man's ability to control his destiny unmatched by advance in his ability to remain in charge of the processes through which that control is operated. In such conditions the maintaining of an independent critique of society's evolution, the raising of fundamental questions about assumed ways of handling problems, moral, medical, material, technological, the making possible (not of course ensuring) that human freedom in the critical sense of ability to make aware choices is not submerged—these are functions of crucial importance. Their performance requires the nurturing of an elite of creative and critical intelligence, institutional independence from external control (though not of course from influence or enquiry), and self-conscious internal government not crudely mirroring developments in society. Of necessity it involves tension between society and the universities. But this is not an ivory tower concept, not a pursuit of knowledge for its own sake: on the contrary it is the use of knowledge and autonomy in order to make possible the discharging of a profound social responsibility.

To what extent universities as they presently exist can or do perform this role, maybe matter for argument. My thesis is that they are moving and being moved away from any possibility of performing it. But where else it may be performed in Britain if not in universities I do not see, and a society in which performance of this role goes by default is on the road to death.

Philip Reynolds

The author is pro vice-chancellor and professor of politics at the University of Lancaster.



BOOKS

Escapades of the escapologists

Escape Attempts: The Theory and Practice of Resistance to Everyday Life
by Stan Cohen and Laurie Taylor
Allen Lane, £5.50
ISBN 0 7139 0494 1

Once upon a time there were two sturdy sociologists who, bored by the drudgery and vacuity of academic life and the naive assumptions of their colleagues concerning the meaning of deviant behaviour, *decided to unravel the complicated motivations driving those who consciously and flamboyantly reject society's values. By all accounts, not least their own, it was a daunting task.*

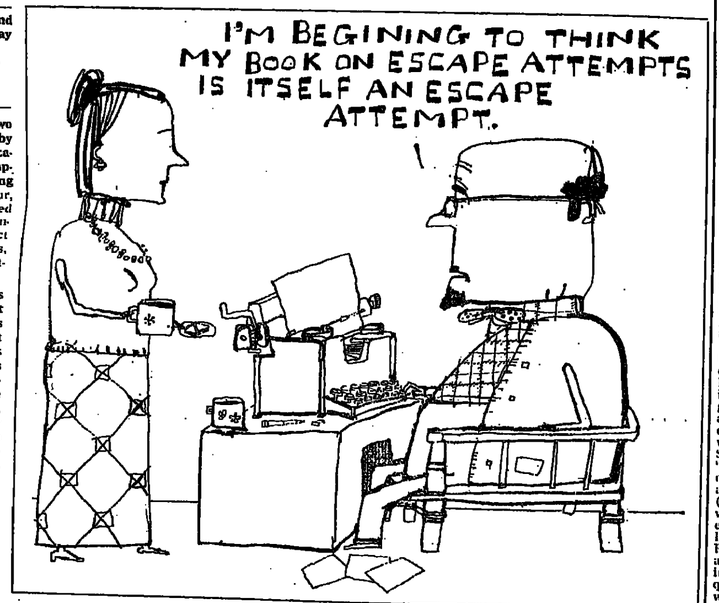
Our *daring* duo buried themselves into action research of the most perilous nature. Late evenings would see them deep in earnest dialectic with the Mods and Rockers on Clacton beaches, weekends closeted in swaying trains, dissecting Marcuse's theories of repressive tolerance with football hooligans, the latter pausing presumably between expert destruction of the seating arrangements for clarification of the occasional esoteric point. The rest of the time saw them sharing marihuana and Mailer with dissident students, shop-floors and Cohn-Bendit with industrial saboteurs and pornography and Norman O. Brown with the raincoated brigade.

At the end, their attempts to convince this motley army of malcontents of their inheritance, their place in the worthy tradition of the glorious romantics, ideologues, radicals and outsiders to whom society "accorded some degree of dignity if not outright approval failed. The stubborn deviants bloody-mindedly told our intrepid seekers after truth where to put their theories and went their resolute way about their various manipulations through the tedious yet demanding business of negotiating from one day to the next.

And then, or so it is told, like Saul of Tarsus, did Cohen and Taylor see the light. What were they doing trying to recruit this ill-formed, raggle-taggle bunch into a respectable army of outsiders when such an army already existed inside society itself and what was more numbered us all in its ranks? So away with books on rape, murder and violence and start an earnest analysis of the gardening magazines, do-it-yourself manuals, holiday brochures, and fashion columns which signpost the "bare painful escapes of fitful life" for the vast conforming masses.

And so we have this book. It is a splendidly written, energetic and sharp-eyed assessment of the strategies, tactics and plans which we all employ to escape from the numbing, boring, frustrating drills humanity [illegible] working, living, sleeping. Some of its chase novelty in drugs, gambling, extramarital affairs, in fantasy itself. Mass-culture assists by providing mass fantasies. There are hobbies, gamos, and, for the healthy as well as the sick, there is the escape route known as therapy. Even art is escape for, according to the argument propounded here, far from it leading its audience into a perspective which transcends reality it merely reproduces in an attractive fashion the more mundane features of that reality.

The whole chronicle is told with such gusto, such unloveing self-exposure, such relentless conviction that it is difficult to withhold full acceptance of the core idea. There is even in this book, as there is in the two books which Taylor and Cohen majestly observe [illegible] novels, hoodlum lives, [illegible] ton books and psychological tracts once promising possible personal



Barry Fantoni

simple behaviour, namely Goffman's *The Presentation of Self in Everyday Life* and Freud's *The Psychopathology of Everyday Life*, an in-built method of interpreting away a dissenting view. For example, were I to demur from the view of sex put forward in this book—a hobby like any other institutionalized escape and one, furthermore, which is only experienced in a truly special way when it takes place surrounded by guilt, anxiety or fear—then most likely I would be accused of using the escape mechanism of *distancing*, of removing myself from the ordinariness and mundanenss of my own experience by insisting that in some unique fashion it was indeed profoundly individual. But what is one to make of assertions to the effect that no situation elicits totally novel feelings, that we simply cannot have new experiences, that it is not possible to become a marihuana user "any more than it's possible to suddenly fall in love or become a mystic"? How do they know? Who have they asked?

Who, indeed. In their earlier criminological studies, the authors made quite a name for themselves, and deservedly so, for eschewing the theories and going straight to their subjects, the deviants themselves. Difficult as it may be to identify a deviant, it is an activity of the most subtle resourcefulness to identify an ordinary man. Cohen and Taylor appear to have navigated this hurdle by the simple tactic of engaging [illegible] the most [illegible] the contexts of the communities [illegible] tions industry. On the basis of this sampling technique, they educe the *scripts* or roles played within a series of major and minor dramas, which form the basis of our domestic, sexual, occupational, leisure and fantasy patterns throughout our lives.

My feeling that in the process they may fundamentally exaggerate the impact of certain of the pressures exerted by the paraphernalia of external reality is reinforced when the authors take me on a conducted tour of their respective homes. It is as they forthrightly admit, a tour through "a museum of half-abandoned relics" of previous and now discarded or walled-off escape routes and free areas. Scattered around are the health-food diet books, fragments of unfinished novels, hoodlum lives, full-of-hopeful-promise books and psychological tracts promising possible personal happiness, old packets of incense sticks, Klee and Picasso reproductions, a few Indian beads "we used to wear to pop festivals" and in the cupboard under the stairs "discarded travel brochures, half-constructed model airplanes, wrinkled dahlia tubers, unfinished watercolours, vegetarian recipe books, the remains of three hand-made candles, a smelly beer-stained polythene bucket and a nasty pile of fetid mushroom culture".

At times this react reads like an adman's dream—there does not appear to have been an intellectual or behavioural fashion which bypassed our two authors. Indeed, whatever about Everyman's need periodically to escape, there is little doubting that Cohen and Taylor are among the most practised of nature's elopers, the Houdinis of this particular circus.

It would be unfair to suggest that they are unaware of such a bias and shortcoming. Indeed, they take great pains to point out the dangers of an ideology which attempts to transform every activity into a potential escape. Just as they appear on the point of endorsing such an ideology, they do an about-turn and like a pair of stern yet trendy nannies rannid us soberly of the demands of "paramount reality", of the sick child at home, the urgent report for work, the overdue mortgage, the garden wall in need of repair. We have to learn, they remind us, [illegible] having taken you to the top of the mountain then tell you that it is foggy? And it is time for tea, that our temporary free areas are only "arousal jags", "binges", "crazy interludes", "escapes" and not stageposts on the way to some alternative reality.

It is not entirely surprising that at this point, the discussion in the book changes from enumerating and analysing the various escape strategies open to contemporary man to an examination of the conflict between paramount reality on the one hand and the individual's preoccupation with his own personal growth. What began as an enthusiastic account of the tricks and devices employed by people to nudge away their sense of reality, if only for a time, alters and a sinister, warning motif can now be heard. Escape, Cohen and Taylor emphasize, can be and often is profoundly conservative. It does not constitute an alternative world but may shore up the crumbling and defective world we've got, indeed, the growing institutionalization of escape routes coupled with a diffusion of what they term "the ideology of possessive individualism" seems certain to prove intolerable.

By its end, the book exudes a pessimism and a nihilism which its authors try desperately to combat. But by now most of the weapons have been thrown away, rejected as faulty. We cannot rely on *meaning*, for it is as illusory as true self. Progress will not rescue us for the search for novelty ends in a blind-alley with the ground littered with familiar scripts. That we might mutate into a race of sensual robots recklessly determined to escape not into novelty, progress or meaning, but into a happy acceptance of multiple selves, each unrelated to the other, and each functioning together in a pluralized life-world is a possible solution which merits serious consideration. Accepting such a bizarre outcome, we might, declare Cohen and Taylor, "more clearly see that the fundamental poverty of human life was endemic to contemporary reality and was irreducible with the instruments provided by that reality".

In the end, they settle for "I escape, therefore I am" as the only acceptable ontological message. It does sound rather like a hymn to the self dressed up in appropriate Marxist harmonies and for the life of me I can't quite see how it differs in any fundamental way from the bourgeois individualism which elsewhere they are at such pains to deride. Indeed, to my mind, the last pages of this fascinating, frustrating book reek with contradiction, one moment endorsing the preservation of the self as a wary, elusive, mobile entity, the next fulminating over the "ruinous preoccupations of a society which celebrates the value of the unique individual identity, a self-consciousness which our society has developed almost to the point of the pathological".

Whether our society celebrates any such thing is open to question as is so much else in *Escape Attempts*. But, despite the somewhat insubstantial nature of its foundations and the idiosyncratic choice of evidence, or maybe because of them, it does represent a welcome change from the usual sociological fare and deserves a most careful scrutiny.

Anthony Clare

Local origin

Sociology and Public Affairs: The Chicago School
by James T. Carey
Sage Publications, £3.95
ISBN 0 8039 0422 2

Despite its more general title this is a book about the origins of American sociology. It is in comparison with Philip Abbott's *The Origins of British Sociology* but Carey is much less interested in a fairly straightforward narrative account of the world from which American sociology grew and moved towards its present day professionalism with its Ph.D. style conferences and establishment diplomh. Sociologists interested in the sociology of sociology and students writing essays on the background and assumptions of the Chicago school of urban sociologists will find part of Carey's study informative. Those with more general interests will be disappointed.

When the President of the United States initiates policy-oriented research, as Herbert Hoover did in 1929, one is naturally interested in the outcome. Distinguished sociologists were called and a social trends committee established. A monumental work was published in 1933 and Edward Shils, writing in 1948 claimed that "No work of Political Arithmetic of comparable scope has ever been achieved for any other nation". (That may be an American extravagance—as a straight work of economic survey the Domesday Book of 1086 takes some beating.) But what should have been the apotheosis of applied sociology, in Carey's words, filled and then quietly forgotten. Inevitably one wants to know why this book provides no answers.

Carey shows how the early sociologists in Chicago were heavily dependent on rich capitalists who used their philanthropy to create more social knowledge. He supported sociology seeks a more exciting than the poorly supported variety. Private donors believed that higher education in early twentieth-century America needed to be institutionalized, government was not prepared to give the support. There were very strong links with local policy makers and reformers who required a good deal of research into what was seen as "social disorganization". This encouraged the sociologists to get out into the streets of Chicago to gather material. Most sociologists associate the production of rich ethnographies of tall with this period of the development of sociology but recently the theoretical orientation of the Chicago sociologists is receiving renewed serious attention. Carey interviews some of the sociologists who were working in Chicago with Park and Burgess and the others and he quotes Herbert Blumer as saying that "an ideology is genuine social scientific in real sense of that term". Certainly it must have been an intellectually stimulating environment, both in as students and professors they explored their local social world together.

Inevitably one looks for lessons which might be applied elsewhere. How can such an atmosphere of enthusiasm and intellectual excitement be engendered? Carey reminds us that the early Chicago sociologists "met in seminars, outside and in the library, and socialized in the evenings and weekends". Students thinking back on their time there described how they "talked sociology from morning to night". My view is that this commitment was largely stimulated by the involvement of the professors in empirical research. They did not seem to spend hours and days on committees and at conferences. I am sure students get much more excited by teachers who are actively involved in research in what seems to them the "real" world, than by the talk about the quality of university teaching there is perhaps little emphasis on making research researchers. Even if the research is not adding a new level to the theoretical crown of sociology, it so often leads to commitment, involvement and enthusiasm. Students are quick to detect when always a little suspicious of teaching departments where one is doing any empirical research.

R. E. Pahl

BOOKS

Galactic theories

Galaxy Formation
by John Gribbin
Macmillan, £5.95 and £2.95
ISBN 0 333 19367 9 and 19512 4

Dr Gribbin's book gives a concise account of the various theories which have been proposed to explain the formation of galaxies. His intention is to provide a book which will be intelligible to a student in the second-year of a degree course in physics, but he hopes it might also reach a wider audience of the scientifically literate. He is careful to state that his book is not meant to be a conventional textbook but is a personal account reflecting the development of his own interests and perhaps, by implication, making use of his subsequent training as a journalist to convey something of the excitement of a rapidly developing subject.

Gribbin begins with a brief account of what is already known about the physical configuration of the universe. He next examines the view that galaxies are formed by the gravitational instability of gas clouds followed by gravitational collapse. He goes on to discuss Layzer's alternative theory of gravitational clustering and then Ambartsumian's totally different approach involving the fragmentation of dense bodies ejected from galactic nuclei. After an approximate, Newtonian treatment of the growth of retarded cores in an expanding universe, using the ideas of Hoyle and Narlikar, he eventually concludes that theories based on Ambartsumian's ideas are the most promising.

He provides only a limited amount of empirical data (to some extent endemic in the subject) with but cursory descriptions of items such as quasi-stellar objects; this is unfortunate, for it limits the usefulness of the book for those not specifically studying astronomy. Further, there are no photographs and only two diagrams throughout.

There is little point in including mathematics in such a work, bearing in mind the level at which the author is aiming, unless that mathematics is more or less complete in itself, but Gribbin tends to produce chunks of inadequately explained mathematics and, further, the underlying physics is sometimes poorly explained with important approximations not mentioned. In the description of the C-field model of Hoyle and Narlikar, for example, some of the terms are not even defined and the reader is referred to other sources. Furthermore, in this section, the same term is used for scalar curvature and radial distance.

I have no quarrel with Gribbin's contention that an alternative to the conventional textbook approach is sometimes worth trying but his book does not amount to such an alternative. Many of its shortcomings arise from his attempt to make too many compromises with the conventional textbook approach, and within the confines of only 80 pages it is scarcely surprising that the result is unsuccessful and cannot be recommended for either the specialist or the non-specialist.

On the positive side the book is generally well referenced and up to date with some lucid and well-written passages which provide a glimpse of what might have been had the author actually written a straightforward account for the non-specialist.

Andrew Byerley

Probability problems

A First Course in Probability
by Sheldon Ross
Collier Macmillan, £4.50
ISBN 0 02 403890 6

Elementary Statistical Concepts
by R. E. Walpole
Collier Macmillan, £7.25
ISBN 0 02 424090 7

Elementary Statistics
by G. A. F. Seber
Wiley, £7.40
ISBN 0 471 177092 2

This new introduction to probability from Sheldon Ross covers basic combinatorial probability, discrete and continuous distributions, the laws of large numbers and the central limit theorem. The last chapter consists of a preview of additional topics such as Markov chains and information theory. The only prerequisite is a knowledge of elementary calculus. As might be expected from this author the explanations are usually very clear and there are many good exercises and examples. The general layout and presentation of the text is of a high standard. However, the book does have some serious flaws which may well prevent its adoption as a recommended text.

An example of a "paradox" is given on page 36. This consists of a countably infinite number of dependent trials. In trial one, 10 balls numbered from 1 to 10 are placed in an urn and one is then drawn out at random. On trial two, 10 balls numbered 11 to 20 are placed in the urn and then one of the 19 balls in the urn is drawn out at random; and so on. The probability that any fixed ball is eventually withdrawn is equal to one. Ross then argues that with probability one the urn is eventually empty. It seems unlikely that this answer will generate much faith in the usefulness of probability and perhaps the author should find out more about the problems of rearranging infinite series.

In the exercises on combinatorial probability two questions ask for a proof of the same combinatorial identity although this is disguised by differences in notation. Two no indication that one questions are in fact the same. Another question is concerned with the following problem: balls are withdrawn one by one at random from an urn containing initially n white and m black balls until all the balls remaining in the urn are of the same colour.

To find the probability that all the balls left are white Ross suggests setting up a system of difference equations on n and m, but the answer can be given in one line by allowing the process to continue and finding the colour of the very last ball in the urn.

In the list of standard distributions are the density functions for the t, chi-squared and F distributions but no indication is given of why they are useful. The detailed proof of the strong law of large numbers seems out of place in a book of this type. It is not really possible to explain the difference between the strong and weak laws without a proper rigorous foundation. But the most serious criticism is about the order of the subject matter. The definition of expectation does not occur until very late in the book, after all the standard distributions have been introduced, so very little motivation can be given for their formulae. It is this last point which will most hinder the use of the book for students who are meeting the subject for the first time.

Walpole's *Elementary Statistical Concepts* is a simplified version of his *Introduction to Statistics*. The only mathematical prerequisite is a knowledge of algebraic manipulation and the topics covered include the usual problems of estimation and hypothesis testing for a mean and difference of two means, correlation, regression and an introduction to contingency tables. The text is extremely well presented in two colours and the explanations are very clear. A cheaper student edition is promised for later in the year, and when this appears it should become one of the most successful books of its type.

Seber's book was originally published in Australia in 1974 but has just been issued in this country. It is intended for service courses for students who have some knowledge of calculus. Topics include elementary probability, linear regression, and hypothesis testing and confidence intervals based on the normal distribution. The treatment is quite orthodox and because the book has no really outstanding feature it has little hope of making any impact against the many established and much better produced American equivalents.

R. J. Reed

New series

Bifurcation Problems in Nonlinear Elasticity
by R. W. Dickey
Pitman, £4.90
ISBN 0 273 00103 5

Quasilinear Hyperbolic Systems and Waves
by A. Jeffrey
Pitman, £6.90
ISBN 0 273 00102 7

These two books are in the recently announced Pitman series Research Notes in Mathematics. The series aims to attract authors from all branches of mathematics and there is some suggestion that the series is intended to cater for rapidly developing fields of mathematics which require the prompt publication of new material. It might be noted in passing that there are a number of somewhat similar ventures already well off the ground from other publishers both here, in Europe and America.

Professor Jeffrey has written a much more tidy and useful work than has Professor Dickey. Jeffrey provides a preface, a detailed contents and an index; Dickey gives only a list of chapter headings. Both books draw their motivation from definite physical problems, Jeffrey mostly from gas and fluid dynamics, Dickey mostly from more specialized problems arising from instability in strings, rods, membranes and plates. Jeffrey is detailed on the precise problem he proposes to study, Dickey unhappily is not.

Some of the checks made on the more elementary problems dealt with by Dickey force me to doubt the points made, at least for the time being. Such doubts may be the result of insufficient attention given to problem definition, but the cumulative effect is that I am not willing to expend effort following the involved and unfamiliar arguments which provide the climax to most chapters in Dickey's work. This is sad, since the aim of such a work in a series of this type must surely be to stimulate the reader even more than usual if the series is to prosper.

Jeffrey has written an integrated, thought-out exposition of quasilinear hyperbolic systems and waves. Dickey has provoked me into a good deal more private paperwork arising from doubts and uncertainties as I read his work and has not given adequate attention to detail in what otherwise could have been an interesting excursion in bifurcation problems.

P. G. Lowe

Mechanics

Elements of Analytical Dynamics
by R. Kurth
Pergamon, £7.50
ISBN 0 08 019848 1

This book admirably fills the gap between the old-fashioned Whittaker tradition and the new subject that has inherited the name of dynamics since topologists took it over. The concepts are carefully presented in a modern way, avoiding the "flood of indices", but the content is essentially a modernized Whittaker.

Intended for physics graduates knowing little theoretical mechanics, the first chapter defines mechanics in terms of Newton's laws for unconstrained systems, reformulates these in Lagrangian form and then introduces constraints by Lagrange multipliers.

The next chapter deals with the Hamilton-Jacobi theory and canonical transformations, and in the following one the treatment of Hamilton's principle leads on to Noether's theorem and a neat account of (Liapounov) stability. (In this chapter English readers may be confused by the use of "Euler's equations" for what are usually called the Euler-Lagrange conditions.) A final chapter explains Jacobi's geometric interpretation (i.e. the energy metric).

The whole book is ideal for its intended audience or for an introduction to the subject for mathematicians. Each chapter has useful references and there are 66 examples at the end.

C. W. Kilmister

Atoms and molecules

Chemistry Decoded
by Leonard W. Fine
Oxford University Press, £9.50
ISBN 0 19 501 8869

In this massive book Leonard Fine sets himself the task of explaining to non-science students how chemistry developed, how it became a scientific discipline and how it works. In 400 pages packed with information he attempts to develop a quantitative, precise way of thinking about the world of atoms and molecules. The theme is developed to the biomolecular level.

The task is enormous since in order to talk about chemistry and to show its relationship both to physics and to biochemistry a new vocabulary has to be introduced and the meaning of each word defined as precisely as possible in the present state of knowledge. A glossary at the end of the book helps to assimilate this new language of science; it is a pity that it contains some inaccuracies—for instance, an ion is defined as an *atom* carrying a positive or negative charge.

It is to the author's credit that he certainly conveys to the student the fundamental problem of science—that through observation and experiment scientists build up a model of the world of our experience which is valid until it is upset by new observations. Science is shown to be a search for knowledge, and its truths to be relative, not absolute. The development of atomic theory from the philosophical concepts of the Greeks to Einstein's theory is used as an excellent example.

The first quarter of the book is devoted to atoms, matter and energy and shows mathematics to be an essential tool of science. The importance of accuracy and precision of measurement is emphasized and units and dimensions are discussed. A certain imbalance of presentation appears here—a whole page is devoted to manipulation of exponentials but only a brief statement defines the modern standards of length and time, wave motion not being discussed until 130 pages later.

Since accuracy and precision are rightly emphasized as fundamental to science, it is a pity that a kilogramme is said to equal 100 grammes and that the element Krypton (Kr) has atomic number 36 on page 30 and 38 on page 31, the latter being a fundamental mistake in a table introducing periodicity. And as one reads on, the number of "printer's errors" increases disturbingly.

It is easy to see that Richmann (Fig. 7.4) was not the "rist" but the "first" martyr of the electrical sciences and that among the Nobel prize winners for DNA structure the name Max perutz (sic) should be spelt with a capital P, but when the carbon-hydrogen bond length is given wrongly both in the diagram and in the text one feels that the book needs a reliable proof-reader before it can be considered to be in its final form.

This is a pity, because the idea of decoding chemistry to non-scientists is a good one and such books are needed. Also this is in principle a well-planned book containing much useful information, and it is clear that the author has put a great deal of work into it. The book is richly illustrated, bringing the *dramatis personae* of chemistry closer to the reader than mere names could ever do, and trying through reproductions of paintings and cartoons to bridge the gap between chemistry and ordinary life. But as it stands, the book is so riddled with misprints that it cannot be recommended, unless as a source of examples for scientific criticism.

Teresa Poole

BOOKS

Discussing moral issues

Experience and Conduct—A Philosophical Enquiry into Practical Thinking
by Stephan Körner
Cambridge University Press, £8.50
ISBN 0 521 21075 5

Law and Morality—A Reader
edited by Louis Blom-Cooper and Gavin Drewry
Duckworth, £12.50
ISBN 0 7156 0804 5

It is difficult, distressingly difficult, to give any sort of general account of Professor Körner's essay on *Experience and Conduct*. In part, this is because it resists rapid summary in much the same way that any piece of patient and detailed analysis resists summary; and this is no bad thing, in so far as it sends readers to Körner's book rather than to a second-hand account of it. But it would be a pity if one failed to convey the curious intellectual charm of Körner's book. It is a curious charm, in that one does not expect to be charmed by anything so rigidly analytical in intention as this essay is, and particularly not by a piece of moral philosophy which begins with the formal theory of probability and the merits of alternative systems of deontic logic; and it is certainly an intellectual charm, because it springs from the way in which Körner seems to scrutinize logical and conceptual distinctions almost as if they are visual or tactile phenomena which it takes particularly careful scrutiny to make out. The idiom is different, but the manner is reminiscent of Moore's wide-eyed inquiry into just what things were *good* in the last part of *Principia Ethica*.

Experience and Conduct is, for the most part, an essay in what Körner calls "exhibition analysis"; what is exhibited is "the general structure of systems of practical attitudes" and "specific aspects and kinds of practical thinking". Since practical thinking is directed towards the bringing about of changes in the course of nature, and to the assessment and evaluation of the changes which we or others bring about, Körner starts with the problems of the formulation of a deontic logic and a calculus of probability which will allow us to formulize rational choice according to principles of morality or law, and to analyse our intuitive sense of the importance of the stratification of attitudes (such as the obvious phenomenon of the person who wants to smoke but wishes he didn't want to). The distinction between attitudes as such and principles in the sense in which moral philosophers and others have been concerned with them is largely made in terms of the requirement that a principle apply to everyone—although the *name* of Kant only occurs in passing, and that of R. M. Hare not at all, there would not be much exaggeration in claiming that *Experience and Conduct* is largely a dialogue with the view of practical rationality which they represent.

The logical preliminaries over—and Körner encourages his readers to treat them as preliminaries, or, indeed to skip them altogether if they feel inclined to—the book proceeds to analyse the nature of moral judgment, the possibility of a purely deontological ethics, the differentia of morality in general and justice in particular, and so on. To pick out a couple of Körner's more dubious claims is a little unkind, but they may serve to illustrate the sort of case he is making.

One continuous difficulty with what he says is that it is never quite clear just how powerful a weapon against bad behaviour he thinks the eliciting of self-contradiction to be. That is, Körner certainly thinks that being moral, or acting on principle, is a form of rational behaviour; and he seems to say when he discusses the differences between prudential and merely selfish behaviour, that what makes prudence "reasonable self-love"—as Bishop Butler called it—is its being circumscribed by morality. Thus, on Körner's account of it, there cannot be such a person as a prudent murderer, and it seems that his non-prudence is a sort of irrationality, precisely because immorality is a sort of irrationality. But I can see nothing in the book which shows anything of the sort. Of course, prudence involves something of the same sort of reflective distance on one's desires that morality does, and an irrational man is not a prudent man; indeed, extreme imprudence is usually what induces one's relatives to have one put away.

But, this does not show that it is the immorality of the goal which makes an action irrational and hence not prudent; it makes perfectly good sense to say that one murderer was prudent and another not, that one had careful plans to avoid detection and arrest, while the other rushed upon his victim and was so carried away by his murderous impulses that he did not stop to think that he was surrounded by police and certain to be caught.

Again, in his discussion of justice, Körner begins with the plausible view that justice is concerned with establishing certain sorts of equal treatment for the practical interests of the members of a society; he then says, very plausibly, that this bare account needs filling out with an analysis of different views of what practical interests men have, and of what obligation we are under to try to get these treated justly. But when he embarks on this he says some rather less persuasive things. One of these is his claim *à propos* of Rawls's attempt to derive principles of justice from an original contract, that what is wrong with trying to derive justice from fairness is that some enterprises can be fairly run but be wicked none the less; and the instance cited is Russian roulette. But, as a theme at Rawls, this is misplaced, because it underestimates the importance of rational prudence in the Rawlsian system—contractors who pursue minimax strategies in conditions which do not (as every critic has noticed since 1957) require anything so cautious, will not anticipate getting a buzz out of Russian roulette.

And one's fears that Körner has misread the whole contractualist theory are not allayed when he goes on to suggest that Plato's [illegible] theory ("cobblers stick to their lasts") is "compatible with the heuristic assumption about the political society" and the reason why their conceptions of justice are so different lies in different moral principles; surely, it is the metaphysical—than the moral element in nature has a niche for each creature of our kind can be in which we will be as happy as any which we shall serve a genuine harmony. The Platonic vision short-circuits any account of a prudent, ignorant individual who pursue by way of a strategy securing their unknown future.

Experience and Conduct is a sober black jacket, and is not encumbered with examples from everyday life. The auxiliary and black is equally appropriate to *Law and Morality*, which is, as one other things, a spatial review of intellectual [illegible] is a collection of essays on the law's treatment of such issues as in principle and in practice judges, philosophers and in the street—or in the letters—pronounce on the rights and wrongs of punishment in general and capital punishment in particular, on how the law should deal with family affairs, whether some incestuous, or extra-marital, sex we should be allowed to decide ourselves and our unborn offspring, and whether pornography and blasphemy need putting down with a heavy legal hand.

Professor Crick supplies the face to say that he will only prosecute calling him permissive that he disapproves a good deal of drugs and pornography—or, who's been "blackguarding" Professor Crick, stop it. The book supply more useful introductions each of the chapters, filling in historical background that the readers will lack.

But it is the selection that justify the book—a volume, I may say, has been [illegible] mad Hegelian in [illegible] a type so small that my impression was that the man had been pinched and the face alone left behind. Blackstone's that suicide was an offence against God in "invading the prerogative of the Almighty and rushing into his immediate presence uncalled for" is a nice piece of comic relief and Lord Goddard's view that capital punishment provides something like black comedy. The book ends on a light note with Lady Wootton finding herself unable to sleep after watching a play called *Council of Love*, in which the Pope appeared as a screaming [illegible] and the BVM as "a voyeuse". We are also reminded that people like writing to *The Times* about it. Thorsen three whole years ago. Still, one should not end on a frivolous note. The usefulness of this collection is even more real than its entertainment value; its editors are to be congratulated on a workmanlike as well as a spirited job.

Alan Ryan

A scholarly dissertation

Wittgenstein: A Critical Study
by Robert J. Fogelin
Routledge & Kegan Paul, £4.75
ISBN 0 7100 8426 9

The first reaction of a reader to this latest volume in Routledge's series The Arguments of the Philosophers is one of heartfelt sympathy for the author. At the time when the book was commissioned the publishers were well known for having produced over the years a large number of distinguished philosophical texts in workmanlike and inexpensive editions. The first volume of this very series, Gosling's *Plato*, was a handsome book in the publisher's best tradition. But now the publishers have capitulated to the escalation of printing costs and offer us instead of a printed book a reproduction of an unjustified and minuscule typescript. The reader works through the book with an oddly familiar feeling of déjà vu. Halfway through he realizes why the irritating sensation is so familiar: It is exactly like reading a doctoral thesis as an examiner.

Considered as a dissertation for examination the candidate fully deserves to succeed. He is a highly intelligent philosopher who has studied Wittgenstein's best-known works with great care; his interpretations and critical judgments are almost always correct and are expressed with economy and elegance. He offers us almost a line-by-line commentary on the *Tractatus* and the *Investigations* with a rather appendix-like chapter on the philosophy of mathematics. Only when he comes to dealing with the private language argument does he lose the sureness of his grip. But overall the dissertation is meticulous, scholarly and philosophically accurate.

Examiners are often asked, not only whether a dissertation deserves a doctorate, but whether it deserves publication. On this second question an examiner might hesitate. Though the dissertation contains much that is true about Wittgenstein and much what is true has been said elsewhere and often more than once, tediously usually with a greater admixture of falsehood than in the present work). If the work has little positive to offer to a seasoned student of Wittgenstein, it is on the other hand rather heavy going for someone new to the field. Its most serious defect is that it almost entirely ignores the middle works of Wittgenstein which have been published in recent years. Indeed, in several ways, the book is a slightly musty flavoured one. It reads as if it had been written around 1968 and left in a drawer since then. For these reasons an examiner would, I think, hesitate to recommend that the book be published. But after all, it hasn't really been published: not as you and I understand publishing.

Anthony Kenny

BOOKS

Vichian themes

Giambattista Vico's Science of Humanity
edited by Giorgio Tagliacozzo and Donald Phillip Verene
The Johns Hopkins University Press, £10.75
ISBN 0 8018 1720 X

This companion to *Giambattista Vico: An International Symposium* (1969) consists of 28 essays by well-known European and North American scholars on the intricacies and ramifications of Vico's thought.

A good many of the essays are examinations of why Vico and X, where X is variously Kant, Marx, Dilthey, Joyce, Husserl, Cassirer, Piaget, Lévi-Strauss and Norman O. Brown. Clearly there is a danger that Vico will become all things to all men, but here these comparisons are mostly justified by the breadth and universal interest of Vico's ideas. In the words of the editors, Vico's thought constitutes "the center of a wheel out of which many of the themes treated by such . . . thinkers radiate." Furthermore, these thinkers are supposed to share with Vico a conception of philosophy which makes Descartes the villain: they oppose the Cartesian reduction of the mind to its cognitive faculties and instead embrace a holistic, humanist conception of mankind.

The central problem of Vichian thought—and indeed of any social science—receives, not surprisingly, much attention. According to Vico, the natural world, being alien to the human mind (a Cartesian analogue, surely ?), cannot be properly known; only the human, social, cultural world is fully intelligible. This follows from Vico's "creative" theory of knowledge, according to which only what can be made by human beings can be known by them. The problem is that although, as Vico puts it, "the world of civil society has certainly been made by men", that world cannot be explained simply in terms of its having been intentionally created by men. For intentions notoriously go astray, and besides, the men that make society are themselves already social: man makes society but society makes man, a dialectical paradox that has become a commonplace since Marx. Vico's solution, which invokes the guiding hand of providence behind human social creativeness, is both obscure and unacceptable, and unfortunately the essayists are unable to throw much new light on it or on the general problem.

The final part of the book is devoted to Vico's conception of morals. As Alain Pons points out, Vico's creative theory of knowledge has practical as well as epistemological implications. But although we can agree with Ernesto Grassi that Vico points towards "the rejection of any conception of philosophy as a science seeking its own aims in an ivory tower of pure speculation, secluded from the concrete history of man", nevertheless as the reader can discover from the new translation of the "Practic", Vico distinguishes between the political role of the intellectual and of the statesman, and the intellectual has a limited part to play, compared with that of the "aristocratic" statesman.

These and other Vichian themes are well worked over in these essays; the general standard is high, especially in view of the intractability of much of the material, and many valuable forays are made into present-day problems. Vico's vision of a humanist social science could hardly fail to find a sympathetic response in the anti-positivist climate of today, and his generous conception of the scope of philosophy is a wonderful corrective to the subject's constant tendency to slide into sterile academicism.

Andrew Belsey

Seeing as Rousseau saw

Rousseau's Political Philosophy: An Interpretation from Within
by Stephen Ellenburg
Cornell University Press, £10.50
ISBN 0 8014 0960 8

Since the last war, Jean-Jacques Rousseau has excited a good deal of interest as a political philosopher. The old image of the "totalitarian ideologue", propagated alike by progressives such as Bertrand Russell and conservatives such as T. S. Eliot, is now virtually dead. The more impartial perspective and more exacting scholarship of recent writers, of Leigh, for example, and Masters, Shklar, Grimsley, and Charvet among others, has established anew the value and originality of what Rousseau had to say. Even the most signal contradictions in his arguments can no longer be treated as evidence of a defective intelligence; and the history of mental stress, which he himself chose to reveal to the world, can be invoked only to explain away, and not to explain any of the disturbing complexities and paradoxes of his thought.

Professor Ellenburg's new study of Rousseau's political philosophy is the most sympathetic yet, in the sense that the whole exercise is directed towards an endeavour to understand "from within", to expound and make clear rather than to criticize what Rousseau had in mind. A remark about Rousseau having a "surprising blind spot" on the subject of women in politics is almost the only occasion when Ellenburg's willingness to see things as Rousseau saw them falters.

A central point of his case is that Rousseau did not believe in "individualism" on the Lockean-liberal model; but lacking a word for Rousseau's conception of man, he calls it "non-individualist". Ellenburg is surely right to avoid the word "social", which, with its modern associations with "socialism" and "sociology", has acquired a cobarbative resonance. Rousseau believed that man was a political animal in the fullest possible sense; mainly that if a man could *not* be a citizen, his very nature was thwarted. By a citizen he meant something on the lines of a citizen of Sparta, and something totally opposed to a registered voter and taxpayer under the English constitutional monarchy, which after 1689 was the liberal paradigm, even in France. It is in showing how Rousseau differed from the liberal that Ellenburg is able most effectively to explain his singularity. At the same time he maintains that Rousseau, though not an individual was nevertheless an anarchist, in the sense that the Rousseauesque "city" was not an institution which ruled over man, but one in which each man obeyed no rule but that which he imposed on himself.

Some of the problems of understanding Rousseau derive from his way of using words, and these are especially great for the English-speaking reader, since there is no exact equivalent even of familiar uses of words such as *"droit"*, *"prince"*, *"cité"* or *"morale"*, let alone of Rousseau's peculiar uses. Ellenburg is always mindful of these difficulties and gives minute attention to questions of vocabulary; but he tolerates some errors in other people's translations—writing, for example, of *Le Vicaire Savoyard* as the "Savoyard Vicar" (when an important point about that priest is that he is unbeneficed), and of Rousseau's "Letters from the Mountain" (instead of "Mountains", which is the English way of speaking of *Lettres écrites de la montagne* in a generalized sense).

There is no lack of good books on Rousseau's politics, but Ellenburg fills a gap: partly because of the distinctiveness of his approach and partly because of the use he makes of Rousseau's neglected literary works—the preface to *Narcisse*, for example—to throw light on his political ideas. There is also a good bibliography, and some excellent summaries of other publications on Rousseau, which will help to make Ellenburg's book especially useful to students.

Maurice Cranston

THES

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BOOKS

On his own terms

Kant's Critique of Pure Reason—a Commentary for Students
by T. E. Wilkerson
Clarendon Press: Oxford University Press, £6.00
ISBN 0 19 824549 1

Recently, reviewing *Kant's Criticism of Metaphysics* by W. H. Walsh, I raised the question of whether there was currently room for further books on Kant as there are so many first rank philosophers exploiting the first *Critique* as a sounding board for some independently conceived philosophical stance or *theory*: such men as Bennett and Buchdahl, Hintikka and Kambartel, Rescher and Rorty, Sellars and Strawson. All of this work is of the highest philosophical interest, and Kant, through these interpretations, retains his influence upon the development of philosophy, but, with the exception of Buchdahl, all these authors plunder the text by failing to appreciate Kant's terminology in its historical context. Walsh's book is not only virtually free of this error, it is also clear and genuinely innovative, so I concluded that there was certainly room for yet another Kant book, because Walsh had provided it. Can the same be said of this book by Wilkerson?

Let me say at once that the book has many virtues. Designed as a commentary for students the book exceeds this modest ambition as it contains much ingenious argument which will be of interest to the most competent of those who plunder or are puzzled by the Kantian text. Yet at the same time the book is strangely unsatisfying. And I would like to locate the source of my disquiet at the expense of mentioning only fleetingly particular virtues: these being enormous clarity of exposition and a particularly strong handling of the Dialectic, an ingenious attack upon Kant's distinction between constitutive and regulative principles, and a thoughtful discussion of the nature of transcendental arguments. If I mention these only in order to ignore them, it is not because I agree with them, but because they raise provincial issues rather than issues of principle—issues, nevertheless, of considerable philosophical interest. Let me rather try to articulate my disquiet by reference to two central theses of Wilkerson's book.

The *Critique* is a work of epistemology: an attempt to exhibit the cognitive relations between a knower and the world known. The interface—to use Hacking's useful phrase—between these two is, in Kantian terminology, a representation in its two varieties of intuition and concept. A firm grasp of this duality is thus crucial to a fair interpretation of Kant: indeed, Lewis White Beck, Kant scholar extraordinary, has remarked in one of his less formal moments that, had he to compress Kant's achievement into one sentence, this would be: in order to know and to act, it is necessary both to see and to think.

[illegible] Kant's philosophy right. But, as this is to appreciate what this significance is. For brevity let me concentrate on intuitions. Concepts would take us into a discussion of the merits of the chapter on schematism, which I take to be of crucial importance where Wilkerson believes it to deal with a "futuous problem". That issue, like my disagreement with him view that the third analogy has "a shadowy existence" where, I rather take it, this is philosophically, as it is historically, prior to any engagement with those on substance and causality, occurs at a lesser level of principle than that I am after.

Now the term "intuition", like the generic "representation", suffers a triple ambiguity. Sometimes it is used to mean an awaiting, as a mental act; sometimes with the content, in the Scholastic sense, of such a mental act; while sometimes it is used to mean the object intuited. It is only in the first sense that the term "intuition" in Kant's sense comes to mean anything remotely akin to the twentieth century use of the word "perception", and then the kinship is so remote that it can only be misleading. But Wilkerson is quite happy to use "intuition" interchangeably with "impression", "sense-datum" or "perception", so that we get the inevitable result that Kant's transcendental idealism is rendered indistinguishable from Berkeley's idealism (thus making a fourth equation: of "intuition" with "idea").

Thus a first example of my disquiet is in Wilkerson's happy but, to be fair, not altogether unargued assumption that Kant's use of the words *Anschauung* and *Begriff* occupy the same conceptual locations as do the twentieth century words "perception" and "concept". This is a mistake. To say that the objects we encounter in the world are representations, or even "mere" representations, is not to say that they are "nothing but perceptions".

Let me turn to a second thesis: that test piece for any Kant commentary which comprises the Transcendental Deduction where Kant tries to establish a necessary link between a unified consciousness and a unified world of which we are conscious. Wilkerson deploys a tenacious version of the extraordinary Strawson argument: developing something like the Kantian concession promises: it is an argument which deserves applause and attention (Rorty has done a good job). Unfortunately it resembles Kantian argument about as much as does a hook a hammock.

Kant talks about representations having to be related to us as the possible "I think": but the "I think" of the first-person pronoun has as nothing but misleading for Kant's more usual and preferred view that representations have to be related to *Bewusstsein überhaupt*—or to consciousness-in-general, which is of its nature an impersonal consciousness. Representations have to be somebody's representations, but nothing whatsoever is to be with representations having to be related to the necessary unity of apperception: clearly this is something I can't argue here, but would challenge the body of Strawsonian persuasion to explain the words "the" and "necessary": I doubt they can do it except by begging the question and saying they are there by mistake!

These two examples perhaps explain my fundamental disquiet: Wilkerson's book is avowedly designed to help students grapple with the Kantian text: but at crucial points it fails to come to grips with the own language. And until we penetrate that language we cannot understand or appraise the arguments which it is used.

M. J. Scott-Taggart

Bishop Berkeley

A Bibliography of George Berkeley, Bishop of Cloyne, his Works, and his Critics in the Eighteenth Century has been compiled by Geoffrey Keynes and published in the Soho Bibliography series at £12.00 by Oxford University Press. It contains full bibliographical descriptions of every edition of all the major and minor works, including all foreign translations, published in Berkeley's lifetime. In addition, detailed descriptions of contemporary works, both for and against Berkeley, which were provoked by his writings, are included.

BOOKS

Neo-Thomist inspired by the high Middle Ages

Jacques Maritain, Antimodern or Ultramodern? — An Historical Analysis of his Critics, his Thought and his Life
by Brooke W. Smith
Elsevier, £10.75
ISBN 0 444 99013 5

The theological counterparts in Western Christendom of the late nineteenth century belief in the inevitable progress of civilization were liberal Protestantism and Catholic modernism. The holocaust of the First World War shattered that easy optimism and, theologically, bred the twin reactions of neo-Calvinism and neo-Thomism.

Neo-Calvinism, as exemplified in the work of the great theologian, Karl Barth, revived the theological insights of the Protestant Reformation. This Protestant renewal of Christianity made the doctrine of Original Sin crucial and central to its proclamation. Without God's grace, which comes as a quite unmerited gift of faith, man's nature is irredeemably corrupt and sinful. Man's reason is inevitably tainted by this corruption, so that the belief that man can, by his own unaided reason, order and control his destiny in the world is sheer, unbelievable folly, the product of sinful pride. To the liberal theologian, this message sounded dangerously anti-intellectual and irrational.

For its part, neo-Thomism struck further back into Christianity's historical past and found its inspiration in the high Middle Ages. There, under the powerful influence of one of the greatest philosopher-theologians of all time, Thomas Aquinas, who harnessed the philosophical insights of Aristotle in the service of Christian theology, the neo-Thomists claimed to discover the almost perfect model of a truly Christian culture and civilization in which the right balance existed between the spiritual and the temporal, with the spiritual infusing and perfecting the temporal.

In the inter-war period, when neo-Thomism was most in the ascendant, Jacques Maritain, the French philosopher and theologian was undoubtedly one of the movement's leading lights. Certainly in Britain, through the efforts of a devoted admirer, Christopher Dawson, his prolific writings on social, cultural and political subjects from a Thomist standpoint, were effectively brought to the notice of intellectually committed Christians.

Unlike neo-Calvinism, neo-Thomism could hardly be accused of being anti-rational or anti-philosophical, since Aquinas defended Christianity from a base developed from the rationalism of Greek philosophy. But neo-Thomism did condemn—and Maritain was no exception—all modern philosophical developments stemming from the seventeenth-century philosophical revolution of Descartes as a horrible mistake. It also viewed the fruits of Newton's scientific revolution, which in many respects ushered in the modern world, with distinct distrust. Neo-Thomism found itself at odds with modern industrial, commercial, scientific civilization. Not surprisingly, its critics condemned it for wanting to accomplish the impossible, by obliterating all traces of the modern world and turning the clock back to the high Middle Ages.

Professor Smith, who teaches history at the University of New Mexico, has written what is far too short a book (nearly 40 of its pages are taken up by notes, an extensive bibliography and a poor index) in defence of the thesis that Maritain can be successfully defended against the contrary charges of his many critics of being either anti-modern or ultra-modern.

He is only anti-modern, she claims, in the sense that he condemned all those materialistic tendencies in modern Western civilization which throttled the growth of that spirituality which is at the core of the Christian faith. In this regard he lined up with Marxists in his condemnation of capitalism.

As for the charge of being ultra-modern, he is only guilty, claims Smith, to the extent that he accused the modern Catholic Church and its hierarchy of being the unwitting tools of the educated bourgeoisie in keeping the masses in a state of intellectual stupor and ignorance, particularly in matters of doctrine. Maritain was ultra-modern in the sense that he supported all liberal movements which aimed at theological emancipation of the Catholic masses. To this extent he has been the architect of recent far reaching changes in the Roman Catholic Church.

It seems that Smith, through her extensive reading of the vast literature on Maritain's thought and philosophy, has got hold of a thesis well worth expounding and defending. Alas, she writes from the standpoint of a devoted but uncritical devotee of her idol, and her discussion, although readable, is far too superficial ever to rank as a serious contribution which furthers our understanding of the complex strands in Maritain's thought. Although her publishers claim she offers an "analysis" of Maritain's views, there is in fact precious little analysis, since the level of discussion never rises above the straightforward summary of what Maritain and others have written.

Moreover the book is curiously structured. It ends with a brief biography, outlining early influences on Maritain. Had she chosen to open her book with this chapter, Smith might well have been led to reflect on the fact that his grandfather abandoned Catholicism for liberal Protestantism, and that his mother brought him up in this strongly liberal theological atmosphere; this was the starting point of the story of his conversion to Thomism, via youthful contact with socialism and the love affair which ended in marriage with his neurotic but deeply mystical wife.

T. A. Roberts

Reviewers

Anthony Clare's most recent book is Psychiatry in Dissent, he is a clinical psychologist at the Institute of Psychiatry, London;

Anthony Kenny is tutor in philosophy at Balliol College Oxford and has written a study of Wittgenstein;

M. J. Scott-Taggart is reader in philosophy at the University of East Anglia;

T. A. Roberts, professor of philosophy at University College of Wales, Aberystwyth, is author of The Concept of Benevolence;

Alan Ryan is a fellow of New College Oxford.

Delving into Descartes

Descartes' Conversation with Burman
translated with Introduction and commentary by John Cottingham
Clarendon Press: Oxford University Press, £6.50
ISBN 0 19 824528 9

René Descartes died in 1650. In 1648, when he was 52 years old, he was visited by a 20-year-old Dutchman, Frans Burman, who was later to become professor of theology at the University of Utrecht.

Burman came armed with over 70 short passages taken from Descartes's *Meditations, Replies to Objections, Notes against a Programme, Principles* and *Discourse*. Some of the passages were evidently ones of which he wanted no more than an elucidation; others were ones regarding which he had objections to put to Descartes. They conversed in Latin, possibly over a meal for part of the time. (Descartes illustrates the point that one can have two thoughts at the same time by saying "I now have the thought that I am talking and that I am eating".)

Whether Burman took down Descartes's comments word for word, or took notes to be written up later, is not known. In the manuscript, dated four days after the meeting, Descartes's replies are described as "obtained directly from the man himself". Since the discussion was not free-floating, but tied to particular passages of text earmarked in advance, it is quite possible that what has come down to us differs from what Burman actually wrote at the time only in that his friend John Claubert helped him to convert a verbatim report into readable prose. John Cottingham's book comprises an introduction, a translation of the MS, and a full and scholarly commentary on the text.

In his introduction Cottingham makes a large claim. The *Conversation* "centres round aspects of Cartesian philosophy that are of living interest to philosophers today—the key issues in Theory of Knowledge, Philosophy of Mind, and Philosophical Psychology on which Descartes's thought is so fertile". In some respects I think this leads us to expect rather more than we find.

There is the question of the relation of body and mind, for instance. In *Meditation VI* Descartes had written: "Nature teaches through the sensations of pain, hunger, thirst, ecc. that I am not only present in my body as a sailor is present in a ship, but that I am very closely joined and, as it were, intermingled with it." Burman asks: "But how can this be, and how can the soul be affected by the body and vice versa, when their natures are so completely different in their nature.

Cottingham comments that perhaps Descartes is sadly admitting the existence of a brute fact that just cannot be accommodated within his philosophical system. I am not sure whether Descartes would be prepared to make such an admission. His treatment of the problem of reconciling God's preordination with our freewill might be held up as an example of his being prepared to accept some things as being beyond our understanding. But it is one thing to say that we cannot expect to understand things involving God and quite another to say that we cannot expect to understand things about our own nature. Descartes thought that his method of doubt provides us with a means of arriving at certain truth about our own nature.

Although the *Conversation* does nothing to remove "the most serious difficulty of Cartesian dualism", it helps to shed light on a great many questions of Cartesian exegesis. For example, is "I exist" a proposition we are supposed to know immediately and directly, or only mediately, via some process of reasoning? Is there a circle involved in holding *both* that the reason we have for being sure that what we clearly and distinctly perceive is true is that God exists, and that we are sure God exists because we perceive this clearly? In what sense are our ideas "innate"? What reason is there for holding that God has created us "in his image"?

I wonder if Descartes ever tired of being required to defend and elucidate what he had written earlier. When Burman had finished asking him about what he had said in the *Meditations*, and before he started on the other works, Descartes seemingly volunteered a remark unrelated to any question Burman had asked. A point to note is that you should not devote too much effort to the *Meditations* and to metaphysical questions, or give them elaborate treatments in commentaries and the like. Still less should one try to do what some try to do, and dig more deeply into these questions than the author did: he has dealt with them quite deeply enough."

Godfrey Vesey

History of the present king of France

The Doctrine of Propositions and Terms
by A. N. Prior
edited by P. T. Geach and A. J. P. Kenny
Duckworth, £5.95
ISBN 0 7156 0691 3

Papers in Logic and Ethics
by A. N. Prior
edited by P. T. Geach and A. J. P. Kenny
Duckworth, £8.95
ISBN 0 7156 0821 5

Arthur Prior, who died in 1969 at the age of 55, made many valuable contributions to formal logic, the philosophy of logic and their history, of which the most important and original is his work on modal logic, particularly tense logic. Together with an earlier posthumous volume and one which is yet to appear these two volumes will complete the publication of his writings.

The Doctrine of Propositions and Terms consists of historical and critical material contained in an unpublished manuscript which was superseded by his *Formal Logic*. *Papers in Logic and Ethics* consists of 22 essays of which five are published for the first time. The editors have written a brief introduction to the historical work and a brief preface to the collection which tell the reader what he ought to know about the two books in the context of Prior's work as a whole and in the light of the contemporary state of the issues discussed in them.

Because of lack of space and the technical nature of a large part of the books any indication of the problems examined and the solutions proposed by Prior must of necessity be highly selective and the selection itself bound to be rather idiosyncratic. It seemed proper to deal with two topics which are still widely discussed—one taken from the historical book, the other taken from a newly published paper contained in the selection.

The first is the problem of the existential import of categorical propositions. This problem will be of particular interest to those who have followed with some concern the more recent and evermore complex history of the non-existing present king of France—more precisely to those who have been wondering whether an expression such as "The present king of France is bald" is meaningless or a meaningful sentence and, if so, a false sentence, a sentence without truth-value, a sentence with a truth-value other than truth or falsehood etc. (There is, if I am right, at least one other possibility.)

Prior discusses the nature and history of the general problem of existential import in a thorough, clear and instructive manner. He shows among other things that the often repeated slogan that existence is no predicate can be reasonably understood in a number of different ways which had their able defenders in J. S. Mill, Brentano, J. M. Keynes and others. He similarly considers some recent analyses according to which the expressions "Every X is Y" and "The so-and-so is Y" are meaningless when nothing is a Y or so-and-so. Prior's historical account of this analysis is uncharacteristically insular in that he omits to mention that it had been adopted, defended and formalized in the first volume of the fundamental *Grundlagen der Mathematik* by Hilbert and Bernays, published in 1934. At the end of his examination of the problem of existential import Prior does not feel able to make up his mind which of the competing views is *the* correct view. Nor does he consider the possibility that what is at issue here is to some extent the choice of a useful convention and that a convention which suits a mathematician may not suit a general linguist.

The second topic is the contrast between the case with which logicians can deal with relations between things and their qualities or between things and their parts and the difficulty they seem to have in dealing with the relation between things and substance or substances. The difficulty consists mainly in finding a correct paraphrase for the distinction first made by the linguist Jespersen between things-words and mass-words. Prior's own solution seems deceptively simple and consists essentially in reducing the thing-substance to the whole-part relation—e.g. by analysing "x is wholly made of snow and dirt" by "Some parts of x are made of snow and some parts of x are made of dirt and all parts of x are either made of snow or made of dirt".

My two examples can only very imperfectly convey the wealth of ideas and the technical ingenuity which went into the making of the two posthumous volumes. They will not only richly reward their serious readers, but are bound to strengthen their immunity to two familiar intellectual vices: the obscurantism which by formalizing insignificant ideas tries to endow them with an illusion of grandeur; and the arrogance which instead of making the effort of following formal arguments, where others are impracticable, avoids them by haughtily denouncing them as too trivial to be worthy of attention.

Stephan Körner

An attempt to map out philosophy's bounds

Knowing and Acting : An Invitation to Philosophy
by Stephen Toulmin
Collier Macmillan, £3.25
ISBN 0 02 421021 8

Professor Toulmin's book is addressed to those who have little or no acquaintance with philosophy. It is intended to explain, in a general fashion, both something of the way in which philosophy has developed, and something of the philosopher's tasks and interests. It aims to provide a "rough map of the territory of philosophy", in such a way that the reader can see how philosophy will in the end become technical, without leaving him floundering in a mass of technical detail.

The central part of the book is concerned with the giving and having reasons for the things we believe, claim to know, or do. Three chapters are devoted to three different approaches to this general topic. That which deals with the formal approach ("The Philosopher as Geometer") is the most successful. Each chapter contains a section on the history of ideas and an account of the influences which led philosophers to approach the topic of reason-giving in different ways, to pose different questions and to offer different answers.

In the first two of these chapters Toulmin introduces some more specific philosophical issues by considering the merits and demerits of each approach when it is applied to seven areas of philosophical interest. These are, roughly, problems about: other minds, material objects, scientific explanations, predictions, moral and aesthetic judgments, and language. Each chapter ends with a critical section. The formal approach, which takes as its fundamental question: "How can we achieve formal rigour in our logical connections, and absolute certainty?" leads to scepticism. The commonsense approach, taking as fundamental the question "How can we establish the common standpoint and shared experience required in order to achieve general and warranted experience?" leads to relativism.

This pattern is abandoned in the chapter on the critical approach. It is extremely difficult to determine what this approach is supposed to be. It is not assessed by reference to examples, and there is no critical section. By using a form of this approach, we can, apparently, "still try to relate the particular preconditions relevant in different fields of experience to one another, so as to yield a broader and more consistent picture of human life in the world". It is not easy to understand, even roughly, what this means.

The concluding chapter contains sections on "Philosophy and Human Nature", "Individual and Collective Self-Understanding", and "Philosophy and Action". It is claimed that the problem by means of which the topic of reason-giving was introduced, that of reconciling the apparently conflicting views of man as rational agent and as causal object, is soluble by the use of a "broader approach". This broader approach is an amalgam of the three approaches considered. They are not rivals, so much as "complementary elements within a single, larger picture of human thought and nature as they interact within the world of our experience".

While the earlier chapters of the book may help the beginner to understand something of the philosopher's tasks and interests, it is unlikely that he will be helped by the later ones. In no sense has the reader been shown how, in the end, philosophy will become technical. Indeed, the book leaves the impression that philosophy has moved away from the technical, the rigorous and the precise; that it has become progressively less concerned with specific issues and more concerned with highly general ones. This is because, as he acknowledges in the preface, Toulmin has allowed his own preferences to colour the map he offers. It is hardly fair to expect, as he seems to, that this will be apparent to the beginner.

It is a pity that there is no bibliography. So many philosophers are mentioned that some indication of the relative difficulty and accessibility of their writings would have been useful to anyone wishing to go on with philosophy.

Betty Powell

Hegelian guidebook

Freedom and Independence: A Study of the Political Ideas of Hegel's "Phenomenology of Mind"
by Judith Shklar
Cambridge University Press, £5.95
ISBN 0 521 21025 9

The task Professor Shklar sets herself in her lucidly written and well-documented book is to give the student of politics a guide to Hegel's first major work, *The Phenomenology of Mind*. Such a guide is [illegible] obscurity of language, the mixture of abstract philosophy and historical illustration bewilder the reader. Hegel's aim was to give an account of the development of consciousness from the most simple stages of self-awareness to the fullness of self-knowledge. In marked contrast to the Cartesian cognitive picture of a self-sufficient mind, Hegel emphasizes the importance of culture and social institutions in determining the structure of our actual thinking.

Shklar's study is largely concerned with those parts of *The Phenomenology* which deal with political and moral ideas: more specifically, as her title suggests, with the ideas which cluster round the concept of freedom. But she also believes that her discussion will help to illuminate the work as a whole.

After giving an excellent summary of the argument of *The Phenomenology*, she considers Hegel's account of Greek political thought, his analysis of the failure of past attempts at moral theorizing, his description of the development and extinction of the policies of Greece and the *ancien régime*, and finally Hegel's critique of the political and moral thought of the age which followed on the French Revolution.

It may seem a little churlish to criticize Shklar's valuable contribution [illegible] the work a more down to earth character than it actually has. Despite Hegel's lavish use of historical examples, he is essentially formulating a metaphysics, a rational system of dialectically organized categories, which he believes the development of our culture illustrates. Further, she updates Hegel when she describes the propositions of his system as "true portraits of our experiences". Surely this is wrong. Hegel's propositions are not Wittgensteinian pictures of facts; they are necessary truths holding for all possible experience. On the credit side, Shklar's book does widen and enrich our appreciation of *The Phenomenology*, which in itself is no mean achievement.

Wolfe Mays

Conventional view

The Grammar of Justification: an Interpretation of Wittgenstein's Philosophy of Language
by John T. E. Richardson
Sussex University Press, £6.00
ISBN 0 85621 054 4

After the publication of his *Tractatus Logico-Philosophicus* in 1921, Wittgenstein abandoned active philosophical studies in the belief that he had solved, at least in outline, the major problems of philosophy. His return to philosophical activity was prompted by discussions with Frank Ramsey, Piero Sraffa and Christopher Brouwer, in 1928, which directly challenged the main doctrines of the *Tractatus*. In *The Grammar of Justification*, Mr Richardson offers an account of Wittgenstein's later philosophy of language which sees Wittgenstein's position as an elaboration and generalization of the constructivism of Brouwer's lecture.

After an opening discussion of Wittgenstein's views on the relations between philosophy and language, Richardson examines the "meaning is use" slogan, the notion of family resemblance, and finally the concept of a criterion. He refers freely not just to the better known texts, such as the *Investigations* or *Zettel*, but also to such recently published works as the *Philosophische Bemerkungen* and the *Philosophische Grammatik*. He is obviously very familiar with the Wittgenstein corpus.

However, the book is unsatisfactory for two reasons. First, it is not clear what its point is. The interpretation it offers of Wittgenstein's views is conventional, and can be found in a number of other commentaries; and the less usual claim that it was Brouwer's influence which was crucial in the development of Wittgenstein's later thought has already been propounded and defended by Peter Hacker in his *Insight and Illusion*). It is not clear even how Richardson sees his own contribution. He remarks, at one point that "very many philosophers have bothered to ask" what the influence was of Brouwer on Wittgenstein. Yet a page later, he pays "credit to the previous research which has considered the influence of Brouwer's ideas on Wittgenstein's later philosophy". In what ways Richardson believes his own account of the relations between Brouwer and Wittgenstein goes beyond that of Hacker remains obscure.

Second, Richardson's style does not make for easy reading. He is explicit that his interest is exegetical not critical, but he hardly ever manages to distance himself (or his audience) from the texts sufficiently for the importance of the points he is making to become manifest. His overall interpretation is all too often submerged beneath a plethora of quotations from and paraphrases of Wittgenstein.

Nicholas Everitt

Great failu[re]

Friedrich Nietzsche and the [illegible]
by Tracy B. Strong
University of California Press, [illegible]
ISBN 0 520 02810 4

One can conveniently summarize the main difference between Nietzsche and his contemporaries by [illegible] at his criticism of the Englishe utilitarians. Nietzsche recognized [illegible] face of the failure of traditional practices on the preference of the individual. However, he believed that utilitarianism was [illegible] more than the illegitimate elevation of specifically English cultural ideals and practices into universal norms. In this respect Nietzsche misunderstood utilitarianism.

The utilitarians were arguing that if you use the principle of utility as a measure of moral behaviour and they could think of no more coherent formula, then you are obliged to consult the individual about his preferences. They retained that meaning (pleasure, happiness also) is, or ought to be, a social practice created by and for individuals; it was not something [illegible] worldly, and somehow subjective because otherworldly. Utilitarianism is, at least in theory, an excellent way of solving problems of moral justification amidst the clash of traditional and more authoritarian beliefs. It is also a democratic and egalitarian doctrine. In practice, of course, what counts as pleasure or happiness may differ so much among individuals that moral consensus may be difficult.

I have dwelt at length on Nietzsche's attitude towards utilitarianism because it seems to me that Strong accepts his argument and in fact too readily accepts Nietzsche's views on almost everything. Precisely why Nietzsche passionately misread [illegible] utilitarianism would provide an important key to his ideas on democracy and equality. He is unavailable to Strong because the uncritical way in which he reads Nietzsche. This is a book [illegible] presenting a panoramic [illegible] in Nietzsche's thought, and a demonstration that his thought [illegible] "deep relevance" to the problems in the modern world. The book fails in both of its intentions, a failure largely [illegible] methodological confusion. Strong confuses (he might say "stretches") a variety of complementary [illegible] in trying the meanings [illegible] might want to convey. At times he intends to be an historian of ideas linking the "ideas" of Kant, [illegible] Marx, Nietzsche, etc. for his [illegible] ment of Hegel and Marx shows an adequate understanding of [illegible] writers.

Then there is Strong the [illegible] mative moral and political [illegible] here the element of the uncritical disciple is embarrassing. True [illegible] are some insights, but the predominant effect is one of ignorance [illegible] moral and political naivety. [illegible] assays a connexion between [illegible] and the politics of transfiguration which owes more to [illegible] power" sloppiness than [illegible] thought, and his conclusion [illegible] ment of Nietzsche's "deep relevance" [illegible] doom-laden cadences is of a piece with his general approach.

If Nietzsche is of relevance [illegible] the larger political problems of the world, then the prerequisite [illegible] covering that is a clear [illegible] what he thought he was [illegible] sche's prose epigrammatic style will make an answer [illegible] sort difficult, and Strong has [illegible] advance his case by treating [illegible] as if he possessed Hume's [illegible] lucidity. Understanding Nietzsche is also a matter of understanding his historical context, and [illegible] shows no evidence that he [illegible] stands the milieu in which Nietzsche lived. Reading Nietzsche [illegible] aware of an overwhelming [illegible] audacity; an audacity that [illegible] to hold together insight and [illegible] ness, wisdom and naivety, [illegible] and fear. He writes as a [illegible] who has lost his cultural [illegible] and his life can be summarized [illegible] a fruitless search for solutions [illegible] the relativism he found in all [illegible] of culture. An account of the [illegible] ness of that failure would be [illegible] uinely illuminating. This book [illegible] us rather more about its [illegible] than its ostensible subject.

Christopher Ty[illegible]

LETTERS TO THE EDITOR

Sociology of literature

from Mr David Musselwhite and others

Sir,—One was tempted to regard Patrick Parrinder's account of the conference on "Literature, Society and the Sociology of Literature" (*THES*, October 15) as a characteristic example of that species of literary journalism which so provoked the ire of Dr Leavis and let it pass without comment were it not for a number of very serious omissions and distortions.

Once attention is drawn to these "errors" it becomes increasingly clear that the report as a whole is characterized not only by a blasé superciliousness but also by a wilful political intent.

Gratuitous insult and weary *déjà vu* tone apart, the most substantive criticism of the conference made by Patrick Parrinder was to call to mind the "determinate absences" among the papers, and he refers specifically to the absence of any reference to current Marxist historiography. The "determinate absence" is present only in Parrinder's account and this failure to recall the papers delivered by John Oakley and his colleagues at Portsmouth and the paper given by Terry Lovell of Warwick University is both inexcusable and irresponsible.

Even if his notes were deficient, Parrinder might easily have consulted the abstracts of papers distributed before the conference to discover that John Oakley and Roger Bromley were specifically concerned to contribute to the discussion of the nature of hegemony taking place among historians. Considerable attention was given in their contributions to the work of Thompson and Hobsbawm as well as that of Foster and Gray.

Terry Lovell's paper on "Jane Austen and Gentry Society" was likewise concerned to engage critically and constructively with the work of Thompson.

Concerned to reduce the conference to little more than a confrontation between "canonical Marxists" and "free-wheeling eclectics" Parrinder likewise ignores the collective paper on Trevor Griffiths given by Janet Wolff and her associates at Leeds—a paper that concerned itself not just theoretically but also practically with the whole range of problems faced by radical film-makers committed to collection to final television production.

Churlishly exploiting the failure one one paper (out of 16) to appear on time for the sake of a cheap joke he again makes no mention of Alan Wall's original attempt to grapple with the problems of magazine composition. A conference clearly cannot cover everything but the range and variety of the contributions at Essex was as much as one could expect—at least the absences alleged by Parrinder were supplied.

Lack of space forbids a detailed reading of Parrinder's piece else one might dwell on his strange characterization of structuralism (less the inspiration of a Marxist renaissance than the last redoubt of bourgeois apologetics), on his evident misunderstanding of what was said about the relationship between ideology and writing, on his journalistic deployment of innuendo and inference, as well as his appalling style—"the brighter and juicier fruits on the structuralist tree", "smoke-filled lecture rooms".

However, a few words on his remarks on Pierre Machery—"the one Parisian theorist to be invited to Essex" (how many would he have liked?)—are necessary.

First, the most pertinent comment called for by Macherey's visit is to ask why he has not been invited before and, as a corollary, why his work had to wait 10 years before translation into English? Second, to characterize this work as either "canonical" or "banal" is insulting. Third, to facetiously describe his difficult and clearly articulate, delivery in French to an audience of mixed linguistic ability—in such a way as to suggest that the substance of what was said was naive—is simply to distort all considerations of content and context.

More to the point is to note what Parrinder's article tries to achieve. By ignoring all record of the work relating to current historiography, he can set up a false polarity between literary studies and social history. This divisive intention pervades his piece. To ignore the contribution of Portsmouth Polytechnic and the organizational contribution, as well as presence, of colleagues from Thames Polytechnic is to neatly reestablish the university polytechnic division it was one of the purposes of the conference to dissolve.

Having completed this manoeuvre the next step is to pit Eagleton against McCabe, Musselwhite against Macherey and set them all off against the "rank and file".

Finally, having condemned the critical obsession with Eliot and Leavis, Parrinder throws Leavis and Empson back into what he hopes is, by now, a sparling, frustrated pack. It is very clever. It is also a classically Whig ploy; Walpole would not have been ashamed of it. Parrinder's fascination with Thompson's *Whigs and Hunters* is a most revealing—"marvellously dialectical"—declaration of position.

DAVID MUSSELWHITE, JOHN COOMBES, PETER HULME, FRANCIS BARKER, RICHARD OSBORNE,
Conference organizing committee,
University of Essex.

Social work teaching

from Dr Martin Davies

Sir,—If you are correct in your assertion (*THES*, October 15) that many social work teachers would like more central direction of course content, it is an appalling comment on the calibre of staff in our educational institutions.

However, my experience contradicts your impression; the great majority of social work teachers, at least in the universities, value the autonomous opportunities they have for struggling with the immense task of relating theoretical perspectives drawn from sociology, politics and psychology to the practice of social work. Most of them, moreover, they would resent any growth in external control over their teaching.

The Central Council for Education and Training in Social Work may, like all of us, have faults, but it must surely be admired for the way in which it has resisted pressure to devise common syllabuses. Its "pamphlets, books and papers" are valuable additions to the literature, but only because they can be judged critically against texts from other sources.

Social work teaching, like social work practice, has been going through a confusing period. But its problems will be tackled, not by any increase in central direction, but by a wholehearted commitment and learning in self-governing educational institutions.

Certainly the council must be expected to ensure minimum standards in the practical content of social work courses, but any attempt to restrict the variety of teaching—especially in post-graduate setting—has to be resisted, not only by those responsible for social work education in the universities, but also by the committee of vice-chancellors and principals.

Social work has only recently been recognized as an activity ingrained with political significance; all the more important, therefore, that we provide guarantees of freedom, variety and dialogue in social work education. This will not be achieved by any yearning for central direction.

Yours faithfully,
MARTIN DAVIES,
Director of the social work programme
University of East Anglia

Polytechnic benefactors

from Dr John Radford

Sir,—The approval of building plans for Robinson College prompts the following remark. By providing funds for the college, Mr David Robinson becomes the latest in an honourable tradition of generous benefactors of education and scholarship. In return his name will rightly be perpetuated in association with a great university.

It cannot always have been so. Even the most illustrious institutions had to start with small funds and little reputation. I wonder if there is, or will ever be, any instance of a comparable benefaction to a polytechnic?

Yours faithfully,
JOHN RADFORD,
Assistant Director,
North East London Polytechnic.

Defining information science

Sir,—The letter by Mr Robert Mark (*THES*, September 3) cannot be allowed to stand as the last word on an important subject like information science.

The difference between "science of information" and "information science" is much more than purely academic. There is the old analogy of venetian blinds and blind venetians.

Terminology in this area is bedevilled by two problems. Those who, like Humpty Dumpty, want to make terms mean whatever they wish them to mean and those who are status-seekers. One merely has to look at job and course advertisements to see the status-seekers at work. "Information" is used as an up-market garnish for computing, librarianship, television, and even those gentlemen who are sent out to lie for their company—the PR men.

However reprehensible such uses may be, their frequency permits the conclusion that there is a widespread realization that the science and handling of information is in some way vital to the continued existence of complex societies and, further, that the time draws nigh when a coherent body of theory and practice must emerge.

Naively one turns to the Institute of Information Scientists, to the courses Robert Mark mentions, and to those he did not deign to mention both in the United Kingdom and overseas. One expects to see broad synoptic views irrespective of form of information or the medium in which it happens to be expressed. Alas, there is none to be seen.

"Information", "information science" and similar terms are made to have specialist meanings to fit the special pleadings of special interest groups. The Institute of Information Scientists is one of these. It makes very plain that it is an Institute for people who are primarily scientists but who have elected to do their science at the library desk rather than the laboratory bench and who have also elected to cast themselves in a supporting rather than a leading role.

Admittedly, IIS has a leavening of scientist-indexers and other exotica but its literature is quite clear about the mainstream member. There is no difficulty in thinking of as best expressed and used in the form of words, numbers, pictures, sound, . . . remit of IIS. And such aspects are necessarily without the remit of the courses with which IIS has incestuous relationships.

Your earlier correspondent, Ronald Stamper, was much nearer the mark than Robert Mark. There is a sense of pieces becoming visible and available for synthesis into a new whole, and a saddening realization that the synthesis has yet to be done. Indeed, synthetic work has yet to attract finance for it appears to be incomprehensible to academic administrators and grant-giving bodies since it cuts across so many of the present subject borders.

Let us hope that the defect will soon be remedied: that it will dawn on the powers that be that organisms which fail to process and use information with sufficient accuracy and celerity become, quite inevitably, extinct. We are discussing no less than the fitness for survival of our society, or at least that society into which we could transform ourselves.

So confusing is current use of "information science" and similar terms that in my own work I have had to give them up. Perforce one has to coin neologisms. I tend to use two: Informatology and Infologistics. Informatology covers all aspects of the theory of information. I try to keep its use as form—and medium—free as possible; to concentrate on philosophy, generalizations and understanding however imperfect and hence frustrating such may be. On the other hand infologistics is intended to cover the essentially practical applications, and such cannot be form- and medium-free. Nevertheless the experience of thinking at the general level can be useful.

Too often, including in the columns of *THES*, there is argument about how a book may be printed. Too infrequently is the question asked as to whether the information is best conveyed in book medium at all. "Best" here implies not the cheapest kind of copying and distribution by the disseminator alone; it implies an overall view of cost-effectiveness for the seminator, storer, retriever and user (in a word, society) together. And there is also implied the question as to whether the information is better expressed and used in the form of words, numbers, pictures, sound, . . .

In the absence of well-developed informatology, the infologistics has to proceed by crude guess, observation of results and iterative improvement. Not a thing of which to be proud, but necessary. For real problems are upon us now at the levels of man the individual, man in the small working group, and man in the social mass and an imperfect answer is better than none. Would that it were not so.

Yours faithfully,
D. P. MOODY
OCCAM
6 Crossway,
Chesham, Buckinghamshire.

from Ronald Stamper

Sir,—Mr Mark (*THES*, September 3) is right to draw attention to the work of the documentalists and librarians in building up the new science of information. Where we disagree is in our views of the scope of information science.

Last summer I attended several international meetings, where a majority of the delegates would probably regard themselves as information scientists. As it happens, few of them were from Mr Mark's special community. Many were from computing and systems analysis, others had backgrounds in accounting, management, sociology, psychology, economics, engineering and a few in law.

These people were not in any way documentalists but had strayed into the new and exciting territory of information science during the pursuit of their original discipline.

The scientific study of information is potentially a vast subject. In my paper (*THES*, July 23) I did not attempt to catalogue the institutions engaged in the field because they are too numerous.

However, I did pose the question: how can we information scientists (in the broad sense) work more effectively together? Our institutional framework emphasizes our diverse origins as documentalists, computer scientists, systems analysts, engineers, psychologists and so on.

I look forward to a wider range of contacts and I hope, through this correspondence, to learn of other information scientists who wish to foster greater cooperation.

Yours faithfully,
RONALD STAMPER,
London School of Economics.

Canadian libraries

from Gordon H. Wright

Sir,—It was fascinating to read your article on the development of automated library networks in Canada (*THES*, August 27). Reporting objectively on the Canadian scene is not an easy task, especially if you are neither familiar with the politics involved nor with the management issues that on-line automated library networks bring in their wake.

The political demonstration between provinces and between provinces and the Federal Government are very significant. This is particularly noticeable in education and in any area where cooperative endeavour among publically funded organizations is necessary. More so when the Federal Government may have established an organization with a general policy to provide overall national services.

Much has already been achieved in Canada. Your article made no mention of the University of Toronto library automated system which provides a more comprehensive service than that of Ohio. Toronto offers an online system of shared cataloguing which uses a central directory to locate all the records in the date base while providing each library or group of libraries, with their own automated file.

This provides an opportunity to develop individual library system management requirements while sharing input and programme flexibility. The system is widely used by Ontario and Quebec universities, colleges, public and Government libraries. Like Ohio, the system uses the Xerox Sigma.

However, on-line library networks—not tried in England—create considerable dependence on the computer resource. Thus, a dedicated library computer resource requires library manager's to share financial and administrative responsibility in real partnership.

Partnership is difficult to achieve but so also is the creation of a library system capable of meeting individual and cooperative requirements. Not all of the partners in the Toronto system accept that management of such a computer resource should be held by one organization. Everyone presumably prefers to try to control their own destiny.

Link this honest concern with a system using a computer, whose manufacturer suddenly withdrew from the technology, and a feeling of panic is engendered. It was this that led to the interest in Dobis which was designed for operation on IBM, a manufacturer whose systems are widely used in Canada.

As Dobis can only be distributed through one library in each country the National Library of Canada could hardly stand aloof from the debate, and agreed to carry out a full investigation of the system. A very necessary investigation as the system has never been applied to a network and there are many reasons to doubt its cost efficiency in Canada.

Meanwhile, Honeywell stepped into the breach to maintain and market Xerox equipment and there are now excellent prospects. However Toronto cannot extend its services until the new Sigma 9 is installed, it will not, setting that cannot, because response time in on-line networks must be fast, certainly under two seconds.

The decision in Halifax arose from political expediency. Blackwell's provide an order system plus catalogue cards plus individual library tape holdings. The Atlantic province libraries need such a service now but it does not commit them to the system. There was no other service available to meet their requirements and with the present financial constraints, it was unlikely that a shared computer service could be developed.

Most librarians see this as a temporary expediency. Once Canada's National Library has resolved its own dilemma, and Toronto has extended its resource, then the picture may be very different.

Yours faithfully,
GORDON H. WRIGHT,
director of planning, budgeting and administrative services,
University of Toronto Library.

L.e.a.s and fee rises

from Mr Leslie Wagner

Sir,—A potentially disastrous situation faces thousands of students next year. It arises from the implications for local education authorities in further and higher education tuition fees next year.

For most these fees are covered by a mandatory grant for which the local authority is 50 per cent covered by central Government, so the effect of the increase in fees on local authority expenditure will be quite small.

This is not so where student grants are in the discretionary category. This applies to all non-advanced courses where students are not eligible for mandatory grants for one reason or another. Here the entire cost of the increased fees will fall on the local authority.

However, authorities are meant to be at a standstill. Thus my own local authority has calculated that even if the discretionary grants budget is increased by the general rate of inflation the large increase in fees will result in the entire fund being required to pay for students continuing their courses in the second and third years. No grants will be available for any new students.

This situation is likely to be repeated throughout the country. Unless some action is taken the number of students obtaining discretionary grants next year will fall drastically. It needs to be emphasized that these grants are awarded almost exclusively for vocationally oriented courses.

It can be argued that the raising of fees simply redistributes the costs of higher education from the authority providing the courses to the authority providing the students. This is true but in reality the authority saving expenditure will probably use it elsewhere in the education system or reduce the rates.

Yours sincerely,
LESLIE WAGNER,
Grove Road,
Pinner,
Middlesex.

Classified Advertisements

Index to Appointments Vacant, Wanted and other classifications

Universities

ST. MARY'S HOSPITAL MEDICAL SCHOOL
(University of London)

Applications are invited from graduates for the appointment of

SECRETARY OF THE MEDICAL SCHOOL

Candidates should have wide administrative experience, preferably in a University. The successful candidate will take up the appointment on 1st May, 1977.

Salary not less than £8,347 p.a. including London Allowance (Grade IV) Superannuation under USS.

Applications should be made, not later than 27th November 1976, to The Dean, St. Mary's Hospital Medical School, Paddington, London W2 1PG, from whom application forms should first be obtained.

KENYATTA UNIVERSITY COLLEGE—KENYA
(A constituent college of University of Nairobi)

Applications are invited for the posts of

(a) PROFESSOR

and

(b) SENIOR LECTURER IN HOME ECONOMICS

Applicants should hold a higher degree, preferably a PhD, with proven and extensive teaching experience at University level. Appointees will be expected to teach Home Economics and to initiate and direct research in this field for both graduates and undergraduates. Kenyatta University College deals with Teacher Education as its major preoccupation. Experience and qualifications in teacher education are therefore our preference, lack of which does not necessarily lead to disqualification. All members of the Academic Staff are expected to participate in the supervision of the teaching Practice, usually conducted for one month during the long vacation. Salary scales: Professor KE4,920-KE5,100 p.a. Senior Lecturer KE2,772-KE3,600 p.a. (KE equals £1.44 sterling). The terms of service include subsidized housing, membership of Senior Staff Superannuation Fund or Federated Superannuation Scheme for Universities (when members of Staff have been accepted from such membership, the College shall pay to such staff in lieu thereof, gratuity at the rate of 10 per cent of basic salary) and a non-contributory medical Scheme. Expatriates appointments are on tours each of two years duration renewable, and include passages of up to five (5) adults on appointment, between tours and at the expiry of contract. Applicants should give three names of Academic referees and their addresses and at the same time request them to send their references direct to the Registrar without delay. Detailed applications (2 copies) including a curriculum vitae and naming 3 referees should be sent by airmail not later than November 23, 1976, to the Registrar, Kenyatta University College, P.O. Box 43844, Nairobi, Kenya. Applicants should ask referees to send their references direct to the Registrar, without delay.

Applicants resident in UK should also send one copy to the Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further particulars are available from either address.

KENYATTA UNIVERSITY COLLEGE—KENYA
(A constituent college of University of Nairobi)

Applications are invited for

LECTURESHIP IN PHILOSOPHY AND RELIGIOUS STUDIES

Applicants should have a Ph.D. in Islamic Studies and Philosophy, a thorough knowledge of Arabic, and excellent competence in African Islamic Culture and Civilisation with special reference to East Africa. In addition, candidates must be qualified to teach Comparative Religion. Experience in Teacher Education, in particular Islamic Teacher Education, will be an added advantage. Kenyatta University College deals with Teacher Education as its major preoccupation. Experience and qualifications in teacher education are therefore our preference, lack of which does not necessarily lead to disqualification. All members of the Academic Staff are expected to participate in the supervision of the teaching Practice, usually conducted for one month during the long vacation. Salary scales: Senior Lecturer KE2,772-KE3,600 p.a. (KE equals £1.44 sterling). The Terms of Service include subsidized housing, membership of Senior Staff Superannuation Fund or Federated Superannuation Scheme for Universities (when members of Staff have been accepted from such membership, the College shall pay to such staff in lieu thereof, gratuity at the rate of 10 per cent of basic salary) and a non-contributory medical Scheme. Expatriates appointments are on tours each of two years duration renewable, and include passages of up to five (5) adults on appointment, between tours and at the expiry of contract. Applicants should give three names of Academic referees and their addresses and at the same time request them to send their references direct to the Registrar without delay. Detailed applications (2 copies) including a curriculum vitae and naming 3 referees should be sent by airmail not later than 29 November, 1976, to the Registrar, Kenyatta University College, P.O. Box 43844, Nairobi, Kenya. Applicants should ask referees to send their references direct to the Registrar, without delay.

Applicants resident in UK should also send one copy to the Inter-University Council, 90-91 Tottenham Court Road, London W1P 0DT. Further particulars are available from either address.

KENYATTA UNIVERSITY COLLEGE—KENYA
(A constituent college of University of Nairobi)

Applications are invited for

SENIOR LECTURESHIP/ LECTURESHIP IN EDUCATION MEDIA AND TECHNOLOGY

IN THE DEPARTMENT OF EDUCATION

Applicants should have a B.A./B.Sc. (Educ) or Master's degree in Education. A background in Graphic Arts would help. The Appointee is expected to teach undergraduate education courses in the development, use and evaluation of audio-visual media and related technology. To conduct on-site and on-campus workshops and to disseminate information related to media activities in form of catalogues, booklets and survey research. Salary scales: Senior Lecturer KE2,970-KE3,720 p.a.; Lecturer, KE2,430-KE2970 p.a. (KE=£1.29 sterling). The British Government may supplement salary in range £3,606-£4,110 p.a. (sterling) for a married appointee or £2,860-£3,364 p.a. (sterling) for a single appointee (normally free of all tax) and provide children's education allowances and holiday visit passages. These supplementation rates are currently under review. Terms of Family passages, biennial overseas leave. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent by airmail, not later than 17 November, 1976, to the Chief Academic Officer, University of Dar es Salaam, PO Box 35091, Dar es Salaam, Tanzania. Applicants resident in UK should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained from either address.

UNIVERSITY OF DAR ES SALAAM TANZANIA

Applications are invited for

SENIOR LECTURESHIP/ LECTURESHIP IN EDUCATION MEDIA AND TECHNOLOGY

IN THE DEPARTMENT OF EDUCATION

Applicants should have a B.A./B.Sc. (Educ) or Master's degree in Education. A background in Graphic Arts would help. The Appointee is expected to teach undergraduate education courses in the development, use and evaluation of audio-visual media and related technology. To conduct on-site and on-campus workshops and to disseminate information related to media activities in form of catalogues, booklets and survey research. Salary scales: Senior Lecturer TZ2,970-TZ3,720 p.a.; Lecturer, TZ2,430-TZ2970 p.a. (TZ=£1.29 sterling). The British Government may supplement salary in range £3,606-£4,110 p.a. (sterling) for a married appointee or £2,860-£3,364 p.a. (sterling) for a single appointee (normally free of all tax) and provide children's education allowances and holiday visit passages. These supplementation rates are currently under review. Terms of Family passages, biennial overseas leave. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent by airmail, not later than 17 November, 1976, to the Chief Academic Officer, University of Dar es Salaam, PO Box 35091, Dar es Salaam, Tanzania. Applicants resident in UK should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further particulars may be obtained from either address.

BELFAST
THE QUEEN'S UNIVERSITY
CHAIR OF SOCIOLOGY

The Senate of the Queen's University of Belfast invites applications for appointment to the Chair of Sociology from 1st April, 1977, or such other date as may be agreed. Candidates should be qualified in sociology in one or more of its lines. The salary is £6,080 per annum, plus a London Allowance of £1,000 per annum. Superannuation benefits under USS. Assistance is available with removal expenses.

Applications should be received by 10th December, 1976. Further particulars may be obtained from the Personnel Officer, The Queen's University of Belfast, BT7 1NN, quoting reference 1245, please quote ref. 76/1245.

BRISTOL
THE UNIVERSITY
SCHOOL OF EDUCATION
TWO RESEARCH ASSISTANTS/ SECRETARIES

Applications are invited for two posts in the Department of Education, Bristol University, for a RESEARCH FELLOW (Ref. 76/1/RA) and a RESEARCH SECRETARY (Ref. 76/1/RS) to work on a project on the Education of Children of Immigrant Families. The Research Fellow will be responsible for the organisation of the project, and for the collection and analysis of data. The Research Secretary will be responsible for the organisation of the project, and for the collection and analysis of data. Salary scale for Research Fellow £1,535-£2,350 per annum, plus London Allowance of £1,000 per annum. Salary scale for Research Secretary £1,535-£2,350 per annum, plus London Allowance of £1,000 per annum. Superannuation under USS. Assistance is available with removal expenses. Applications should be received by 10th December, 1976. Further particulars may be obtained from the Personnel Officer, The Queen's University of Belfast, BT7 1NN, quoting reference 1244, please quote ref. 76/1244.

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

MATHEMATICS RESEARCH

Applications are invited from suitably qualified mathematicians for a RESEARCH FELLOWSHIP in the Department of Mathematics to work in the field of optimal control. Candidates should hold, or shortly expect to obtain, a Ph.D. in the area of functional analysis. They should wish to apply their mathematics to applied areas, but a knowledge of optimal control is not essential.

The Fellowship is SRC-supported and will be for two years duration with salary on a scale £4,174-£5,348 with annual increments and U.S.S. benefits.

Further details may be obtained from the Secretary, University of Bristol, Beacon House, Queen's Road, Bristol BS8 1RU, to whom applications together with a curriculum vitae and the names of three referees, should be sent by Friday, November 19th, quoting reference PHC 1976, quote ref. 76/1/MA.

Loughborough Leicestershire

BIRMINGHAM
UNIVERSITY OF ASTON
DEPARTMENT OF CONSTRUCTION AND ENVIRONMENTAL HEALTH
SENIOR LECTURER IN QUANTITY SURVEYING

Applications are invited for the above appointment. Candidates should have an appropriate academic or professional background and teaching experience, and be able to take charge of undergraduate and postgraduate teaching in quantity surveying and measurement of work, cost control, analysis and planning.

Salary Scale: £6,274-£7,763 per annum. Appointment will normally be made to the first point of the scale.

Application forms and further particulars may be obtained from the Staff Officer (Academic), The University of Aston in Birmingham, Gosta Green, Birmingham, B4 7ET, to whom applications should be returned not later than 29th November, 1976.

CANTERBURY
UNIVERSITY OF KENT
FACULTY OF SOCIAL SCIENCES
CHAIR OF SOCIAL PSYCHOLOGY

Applications are invited for a newly-established Chair in Social Psychology. It is hoped that an appointment will be made early in 1977.

Informal enquiries about the Chair may be addressed to the Dean of the Faculty of Social Sciences, Professor A. W. H. Blumson either by letter to the address below or telephone (Canterbury 0227, Ext. 4020).

Further particulars and application forms (on be obtained from Mr. J. Ellis, Staff Secretary, Rutherford College, The University, Canterbury, Kent, CT2 7NX. Please quote reference A51/76.

CARDIFF
UNIVERSITY COLLEGE

Applications are invited for a CHAIR of ENGINEERING MECHANICAL ENGINEERING and ENERGY STUDIES.

Applications, together with the names and addresses of three referees, should be forwarded to the Vice-Principal (Administration), University College, Cardiff, Cathays Park, Cardiff, to whom further particulars may be obtained. Closing date: 1st December, 1976. Please quote reference 1234.

CARDIFF
UNIVERSITY COLLEGE

Applications are invited for the CHAIR of ACCOUNTANCY and FINANCIAL CONTROL. Salary scale: £6,080-£7,080 per annum. Closing date: 1st October, 1976.

Applications, together with the names of three referees, should be forwarded to the Vice-Principal (Administration), University College, Cardiff, Cathays Park, Cardiff, to whom further particulars may be obtained. Closing date: 1st December, 1976. Please quote reference 1214.

IRAN
ARYA MEHR UNIVERSITY OF TECHNOLOGY
TEHRAN

Applications are invited from persons holding or expecting to receive the DEGREE of DOCTOR (or the equivalent in MATHEMATICS, PHYSICS, CHEMISTRY, BIOLOGY, GEOLOGY, AGRICULTURE, and FOREST ENGINEERING) for the posts of lecturers, holding the degree of Ph.D. in library science and/or the degree of Ph.D. in TEACHING of ENGLISH as a foreign language.

Applications are also invited from individuals holding the degree of Ph.D. or its equivalent in Economics, Management Sciences, Humanities, Management and Economics who intend to participate in graduate teaching programmes designed in an interdisciplinary manner to study the impact and to make an assessment of technological endeavours.

Preference will be given to applicants with previous experience in the field, with knowledge of local Persian language, and who can provide data and evidence of their academic record.

The Academic Vice Chancellor, Professor Najmi, Arya Mehr University of Technology, P.O. Box 9466, Tehran, Iran.

HULL
THE UNIVERSITY
DEPARTMENT OF ECONOMICS AND SOCIAL POLICY

Applications are invited for a post of LECTURER in ECONOMICS, tenable from October 1st, 1977, or such other date as may be agreed, to teach in the 20th century.

The successful candidate will be expected to make a major contribution to the teaching of Economics in the 20th century.

Salary will be at an appropriate point on the scale £3,174 to £6,348 per annum according to age, qualifications and experience. Membership of the appropriate university superannuation scheme will be required.

Further particulars may be obtained from the Registrar, The University, Newcastle upon Tyne, NE1 7RU, with whom applications (three copies) should be lodged with the names and addresses of three referees, should be lodged not later than 30th November, 1976. Please quote reference T1115.

IRAN
ARYA MEHR UNIVERSITY OF TECHNOLOGY
TEHRAN

Applications are invited for the position of HEAD of the following DIVISION:

DIVISION of MINERAL processing research (covering research in extraction concentration, leaching, pyrometallurgy, utilisation of minerals and underground mining).

Mechanical Design, Electrical, Mineral, Mining Production, Soil and Structural Engineering.

DIVISION of [illegible] (covering research in extraction concentration, leaching, pyrometallurgy, utilisation of minerals and underground mining).

DIVISION of [illegible] (covering research in [illegible] Mechanical Design, Electrical, Mineral, Mining Production, Soil and Structural Engineering).

DIVISION of [illegible] MATERIALS (covering research and development in [illegible] cultural products, [illegible] Cultural Ecology, Food Science and Technology and Nutrition).

DIVISION of [illegible] (covering research in [illegible] and [illegible] areas related to [illegible] and [illegible] and [illegible] Cultural Ecology, Food Science and Technology and Nutrition).

The candidate should be a citizen of Iran, and should have a Ph.D. in the fields of [illegible] and should have [illegible] years of experience in the field of [illegible] is mandatory.

Applicants should be of [illegible] academic standing in [illegible] and should have [illegible] years of teaching experience in the [illegible] Geology and Mineralogy.

The candidate should be a citizen of Iran, and should have a Ph.D. in the fields of [illegible] and should have [illegible] years of teaching experience in the [illegible] is mandatory.

Applicants should be of [illegible] academic standing in [illegible] and should have [illegible] years of teaching experience in the [illegible] Geology and Mineralogy.

Salary: Depending on qualifications and experience, from 21,000 to 26,000 per annum, plus housing, medical care, and other benefits.

Further details may be obtained from the Secretary, Arya Mehr University of Technology, Tehran, Iran.

LEEDS
THE UNIVERSITY
DEPARTMENT OF THE ARTS

Applications are invited for a post in the Department of the Arts, to teach Arts and Humanities to students in the Faculty of Technology, with special responsibility for the Arts Course for Science and Technology Students. Salary scale £4,174-£5,348 per annum, plus London Allowance of £1,000 per annum. Superannuation under USS. Assistance is available with removal expenses.

Applications should be received not later than 24 November, 1976, to the Administrative Officer, Room D/D, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, from whom application forms may be obtained.

NEWCASTLE UPON TYNE
THE UNIVERSITY
DENTAL SCHOOL
CHAIR OF CHILD DENTAL HEALTH

Applications are invited for appointment to the Chair of Child Dental Health, which will become vacant following the retirement of Professor J. Halpin on 30th September, 1977. Candidates should have interests in orthodontics and preventive dentistry, community dentistry. The post will carry with it an honorary appointment as Consultant in Dental Health to the Area Health Authority (Teaching). Salary scale is £7,838 to £10,589 per annum. Superannuation benefits.

Further particulars may be obtained from the Registrar of the University, Newcastle upon Tyne, Newcastle upon Tyne NE1 7RU, to whom applications (15 copies) should be sent by 30th November, 1976. Please quote reference 1245.

NEWCASTLE UPON TYNE
THE UNIVERSITY
DEPARTMENT OF MATHEMATICS

Applications are invited for the post of LECTURER in MATHEMATICS, tenable from 1st October, 1977. A research interest in applied mathematics with applications to the natural sciences is desirable. Salary scale £4,174-£5,348 per annum, plus London Allowance of £1,000 per annum. Superannuation under USS. Assistance is available with removal expenses.

Applications should be received by 10th December, 1976. Further particulars may be obtained from the Personnel Officer, The Queen's University of Belfast, BT7 1NN, quoting reference 1243, please quote ref. 76/1243.

Universities continued

KENT
THE UNIVERSITY
[illegible]

Applications are invited from graduates for the appointment of a Assistant Registrar in the Registrar's Division of the University.

The appointment will be made at the salary scale for Assistant Administrators (£3,174-£4,348) and will be made to the Senior Assistant Registrar, Personnel, Registrar's Division, Rutherford College, The University, Canterbury, Kent, to whom applications should be addressed not later than 30th November 1976.

LEICESTER
THE UNIVERSITY
CHAIR OF HISTORY

Applications are invited for the Chair of History, which will become vacant following the retirement of Professor [illegible] in September. The successful candidate will be expected to build on Modern History in the University, would be [illegible] and [illegible] and [illegible] teach [illegible] in the 20th century.

The [illegible] will be made at the salary scale £6,080-£7,080 per annum.

Applications should be received by 10th December, 1976. Further particulars may be obtained from the Personnel Officer, The Queen's University of Belfast, BT7 1NN, quoting reference 1242, please quote reference 1242.

LONDON
THE UNIVERSITY
LONDON SCHOOL OF ECONOMICS
MATHEMATICS

Applications are invited for appointment to a LECTURESHIP in MATHEMATICS from 1 October 1977. A research interest in applied mathematics with applications to the natural sciences is desirable. Salary scale £4,174-£5,348 per annum, plus London Allowance of £1,000 per annum. Superannuation under USS. Assistance is available with removal expenses.

The appointment will be on the Salary scale for Lecturers (£4,174 to £5,348 per annum) or London Allowance of £1,000 per annum. Superannuation benefits. In exceptional circumstances the consideration will be given to qualifications and experience of candidates may wish to note that some than one post may be available and that appointment at earlier date may be possible by mutual arrangement.

Applications should be received not later than 24 November, 1976, to the Administrative Officer, Room D/D, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, from whom application forms may be obtained.

NEWCASTLE UPON TYNE
THE UNIVERSITY
DEPARTMENT OF LAW

The University invites applications from men and women for the post of LECTURER in the DEPARTMENT of LAW. The post is tenable from 1st October, 1977, or such other date as may be agreed.

Salary will be at an appropriate point on the scale £3,174 to £6,348 per annum according to age, qualifications and experience. Membership of the appropriate university superannuation scheme will be required.

Further particulars may be obtained from the Registrar, The University, Newcastle upon Tyne, NE1 7RU, with whom applications (three copies) should be lodged with the names and addresses of three referees, should be lodged not later than 30th November, 1976. Please quote reference T1113.

NEWCASTLE UPON TYNE
THE UNIVERSITY
VICE-CHANCELLORSHIP

The Senate and the Council of the University invite nominations for the post of Vice-Chancellor in succession to Sir Ronald Gardner-Medwin, who will retire in 1977.

The emolument will be on the Salary scale for Lecturers (£4,174 to £5,348 per annum) or London Allowance of £1,000 per annum. Superannuation benefits. In exceptional circumstances the consideration will be given to qualifications and experience of candidates may wish to note that some than one post may be available and that appointment at earlier date may be possible by mutual arrangement.

Applications should be received not later than 24 November, 1976, to the Administrative Officer, Room D/D, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, from whom application forms may be obtained.

OXFORD
THE UNIVERSITY
THE QUEEN'S COLLEGE
OFFICIAL FELLOWSHIP AND PHARMACEUTICAL LECTURESHIP IN FRENCH

The college proposes to elect, if a suitable candidate presents himself, to an Official Fellowship and a Pharmaceutical Lectureship in French, and invites candidates who would take up his duties on 1st October, 1977.

Applicants are invited to be considered for the Official Fellowship and Lectureship, which are open to candidates who are not more than eighteen months or early twentieth century. The Pharmaceutical University Lectureship may be open to candidates who are not qualified for this Fellowship.

Applications, including a statement of the applicant's career and qualifications and the names of three referees, should be sent, not later than 18th December, 1976, to the Provost, The Queen's College, Oxford. The Provost is the author to whom further information can be obtained.

The college is an equal opportunity confirm its choice to those who are the most able candidates of whatever college only those applicants who are eligible for appointment.

OXFORD
THE UNIVERSITY
ST. HILDA'S COLLEGE
TUTORIAL FELLOWSHIP IN ENGLISH LITERATURE

The College invites applications for a tutorial fellowship in English Literature. The University Lecturer (C.U.L.) is expected to teach in the College. Salary scale: £4,174-£5,348 per annum, plus a pensionable supplement of 10 per cent of basic salary.

Applicants should submit a curriculum vitae, stating their interests and publications, which will be circulated to the College Fellows, and should list all Fellows by whom they are referred.

A memorandum concerning the position and further information may be obtained from the Registrar, Room 1, Wellington Square, Oxford, Tel. 0865 [illegible], quoting the reference AA/[illegible]/76.

Applications should be received by 1st November, 1976, and should be addressed to the Registrar, Room 1, Wellington Square, Oxford.

MANCHESTER
THE UNIVERSITY
CHAIR OF ENGLISH LANGUAGE AND LITERATURE

Applications are invited for the Chair of English Language and Literature. Salary scale is £7,838-£10,589 per annum. Superannuation benefits.

Further particulars of the post may be obtained from the Registrar.

Applications (2 copies) suitable for publication, giving full details of qualifications, experience and achievements of the candidate, and the names of three referees, should be sent to the Registrar, The University, Manchester M13 9PL, to reach him not later than 29th November, 1976. Please quote reference T1114.

SOUTHAMPTON
THE UNIVERSITY
DEPARTMENT OF MUSIC

Applications are invited for the post of LECTURER in the DEPARTMENT of MUSIC. Candidates should include among their special interests at least one of the following: Composition, Musicology, History of Music, Performance Practice.

Salary scale £3,174 to £6,348 per annum.

The initial salary will be at one of the first three points on this scale.

Further particulars may be obtained from the Registrar, The University, Southampton, to whom applications (three copies) should be sent by 30th November, 1976. Please quote reference T1112 A.

SOUTHAMPTON
THE UNIVERSITY
LECTURESHIPS IN ECONOMICS, BUSINESS ECONOMICS, FINANCE AND ACCOUNTANCY

Applications are invited for the above posts. One is available on a permanent basis, commencing from 1st October, 1977. At least one other post is available on a two-year basis, commencing as soon as possible and preferably from 1 January, 1977.

Salary on scale £3,174 to £6,348.

Applications as soon as possible and not later than 15 November 1976 for U.K. applicants to Mr. L. E. Swann, The University, Southampton SO9 5NH quoting reference T1109 Ad. Further particulars available on request.

ST. ANDREWS
THE UNIVERSITY
DEPARTMENT OF COMPUTATIONAL SCIENCE

Applications are invited for a Lectureship in Computational Science from candidates with a research interest in computational science and/or computer science. The post is tenable for three years, with the possibility of a further extension of the tenure. The person appointed will be expected to undertake research and undertake research.

Salary at appropriate point on scale £4,174 to £5,348 per annum, starting salary probably not above £4,662 + USS + LDS.

Applications (two copies), preferably in typescript, with the names of three referees, should be lodged by November 26, 1976, with the Academic Registrar, The University, St. Andrews, Fife, from whom further particulars may be obtained.

OXFORD
THE UNIVERSITY
THE QUEEN'S COLLEGE
OFFICIAL FELLOWSHIP AND PHARMACEUTICAL LECTURESHIP IN FRENCH

The College proposes to elect, if a suitable candidate presents himself, to an Official Fellowship and a Pharmaceutical Lectureship in French, and invites candidates who would take up his duties on 1st October, 1977.

Applicants are invited to be considered for the Official Fellowship and Lectureship, which are open to candidates who are not more than eighteen months or early twentieth century. The Pharmaceutical University Lectureship may be open to candidates who are not qualified for this Fellowship.

Applications, including a statement of the applicant's career and qualifications and the names of three referees, should be sent, not later than 18th December, 1976, to the Provost, The Queen's College, Oxford. The Provost is the author to whom further information can be obtained.

The college is an equal opportunity confirm its choice to those who are the most able candidates of whatever college only those applicants who are eligible for appointment.

SHEFFIELD
THE UNIVERSITY
CHAIR OF CHEMICAL ENGINEERING AND FUEL TECHNOLOGY

Applications are invited for the above post which will become vacant on the appointment of Professor [illegible] to a Chair of M.I.T. Salary is on the scale for Professors (£7,838-£10,589) with superannuation benefits.

Further particulars may be obtained from the Registrar and Secretary, The University, Sheffield S10 2TN, to whom applications (one copy) should be sent by 15th November, 1976.

Candidates who submitted applications in response to the earlier advertisement need not repeat as they will be automatically considered further. Quote ref. R.492 Dh.

SURREY
THE UNIVERSITY
LECTURER IN GEOGRAPHY
DEPARTMENT OF INTERNATIONAL STUDIES

Applications are invited for the above post. One is available on a permanent basis, commencing from 1st October, 1977. At least one other post is available on a two-year basis, commencing as soon as possible and preferably from 1 January, 1977.

Salary on scale £3,174 to £6,348.

Applications as soon as possible and not later than 15 November 1976 for U.K. applicants to Mr. L. E. Swann, The University, Southampton SO9 5NH quoting reference T1108 Ad. Further particulars available on request.

ST. ANDREWS
THE UNIVERSITY
DEPARTMENT OF MATHEMATICS

Applications are invited for a Lectureship in Computational Science from candidates with a research interest in computational science and/or computer science. The post is tenable for three years, with the possibility of a further extension of the tenure. The person appointed will be expected to undertake research and undertake research.

Salary at appropriate point on scale £4,174 to £5,348 per annum, starting salary probably not above £4,662 + USS + LDS.

Applications (two copies), preferably in typescript, with the names of three referees, should be lodged by November 26, 1976, with the Academic Registrar, The University, St. Andrews, Fife, from whom further particulars may be obtained.

READING
THE UNIVERSITY
LECTURESHIP IN LAW

Applications are invited for a Lectureship in Law in the established Department of Law. Within the Department, the successful candidate will be expected to teach in one of the following areas: Jurisprudence, Planning Law, Jurisprudence or Legal History, the choice of area would be an advantage.

Salary will be within the range £3,174 to £6,348 per annum, with superannuation under U.S.S. conditions, with contribution of 7.5 per cent of salary monthly.

Further particulars of the post may be obtained from the Academic Registrar (Ref.), University of Reading, Reading, Berkshire RG6 2AH, to whom applications should be sent, in the form of a curriculum vitae, including the names and addresses of two referees, by November 24, 1976.

SOUTH AFRICA
UNIVERSITY OF CAPE TOWN
LECTURESHIP IN POLITICAL SCIENCE

Applications are invited for a Lectureship in Political Science, vacant as from 1st January, 1977.

Appointment according to qualifications and experience will be made on the scale R6,300 to R8,400 per annum, plus R1,000 allowance and a gratuity of 10 per cent of basic salary.

Applicants should submit a curriculum vitae, stating their interests and publications, which will be circulated to the College Fellows, and should list all Fellows by whom they are referred.

A memorandum concerning the position and further information may be obtained from the Registrar, Room 1, Wellington Square, Oxford, Tel. 0865 [illegible], quoting the reference AA/[illegible]/76.

Applications should be received by 1st November, 1976, and should be addressed to the Registrar, Room 1, Wellington Square, Oxford.

ST. ANDREWS
THE UNIVERSITY
DEPARTMENT OF ENGLISH

Applications are invited for the post of LECTURER in ENGLISH LITERATURE.

Salary at appropriate point on scale £4,174 to £5,348. Starting salary probably not above £4,662 + USS.

Applications (two copies), preferably in typescript with the names of three referees, should be lodged with the Establishments Officer of the University, College Gate, St. Andrews, Fife, by December 26, 1976.

Fellowships and Studentships

UWIST

Department of Physics Electronics and Electrical Engineering

SRC STUDENTSHIPS
MEDICAL ELECTRONICS and RADIATION DETECTORS

A number of SRC studentships are available to suitably qualified students in Physics or Electronics for a research programme involving Velindre Hospital, Cardiff and the UK Atomic Energy Authority, Harwell.

Further details may be obtained from the Academic Registrar, UWIST, Cardiff CF1 3NU.

LONDON
THE UNIVERSITY
KING'S COLLEGE
FAMILY EPIDEMIOLOGY POSTDOCTORAL FELLOWSHIP

A vacancy exists for a postdoctoral research fellow to work on a study of heartland structure at the College Field Station at Rugate, near Dorking, Surrey. Applications are invited from candidates who have a Ph.D. with interests following possible interest:

Soil moisture variability and patterns of moisture movement in the near surface zone and the temporal changes in soil moisture during the early stages of heartland regeneration following extensive burning.

The fellowship is tenable for nine months in the first instance, from 1st January, 1977. The salary would be £3,175 per annum, plus London Allowance, contributions would be payable.

Further information may be obtained from the Registrar, King's College, Strand, London WC2R 2LS, to whom applications should be submitted by 30th November, 1976. Please quote reference T1123 Ad.

NEWCASTLE UPON TYNE
THE UNIVERSITY
FELLOWSHIPS

Applications are invited for the following Fellowships (tenable for two years from 1st October, 1977) from persons who have shown themselves able to carry out original research. The rights of each Fellowship is £3,174 in the first year and £3,378 in the second year.

SIR JAMES KNOTT FELLOWSHIPS

Two Fellowships available in any faculty.

THE RED HALL FELLOWSHIP

One Fellowship available for research in Pure Science.

THE ROBERT COBLEY FELLOWSHIP

One Fellowship available for research in any faculty. As a fellowship is tenable for two years, preference will be accorded to candidates who have studied at the University of Newcastle upon Tyne.

Further particulars and application forms (which must be returned by 31st December, 1976) may be obtained from the Registrar, The University of Newcastle upon Tyne, Newcastle upon Tyne NE1 7RU.

SOUTHAMPTON
THE UNIVERSITY
FELLOWSHIP

Applications are invited for this research Fellowship for work in the Geology Department and will be expected to contribute to a large project on the development of structure and tectonics of the Hercynides. The project supplied will be a Ph.D. or equivalent studies and undertake research.

Salary at appropriate point on scale £4,174 to £5,348 per annum, starting salary probably not above £4,662 + USS + LDS.

Applications (two copies), preferably in typescript with the names of three referees, should be lodged by November 26, 1976, with the Academic Registrar, The University, Southampton SO9 5NH, quoting reference T1118 Ad. Further particulars available on request.

LONDON
THE UNIVERSITY
KING'S COLLEGE
MEDICAL RESEARCH COUNCIL SENIOR LECTURER IN SCULPTURE

Applications are invited for the post of Temporary Full-time Lecturer II/Senior Lecturer in Sculpture for the spring and summer terms of the current academic year, the appointment to terminate at August 31, 1977.

Ref: AOA/90/B

Applicants should have a professional reputation and teaching experience at undergraduate level. This is a large post, the successful candidate will be required to teach Fine Art courses and carried teaching and organisational responsibility for sculpture.

Salary scale: LII/SL: £3,876 to £6,174 per annum plus £312 per annum supplement.

Write for full details and an application form, quoting first-class to: Appointments Officer, Middlesex Polytechnic (Ref. AOA/B), Bounds Green Road, London, N11 8NG, to whom completed forms must be returned by November 10.

Polytechnics

ULSTER COLLEGE
The Northern Ireland Polytechnic
FACULTY OF TECHNOLOGY

LECTURER II/SENIOR LECTURER—BUILDING TECHNOLOGY (2 posts)

Applicants should have a sound knowledge and understanding of building technology in:
(a) the principles, factors and requirements which influence the design and construction of buildings; or
(b) the practical production and construction processes involved in achieving appropriate performance standards.

The initial appointment will be within the LII scale with progress to Senior Lecturer subject to efficiency and work level requirements.

FACULTY OF SOCIAL & HEALTH SCIENCES

LECTURER I OR LECTURER II—SOCIOLOGY

Applicants should have a good general background in Sociology, with a special interest in micro and macro approaches to the study of industry on the sociology of industrial societies and development.

Salary Scale: Senior Lecturer —£5,031-£5,855/£6,417
Lecturer II —£3,276-£5,493
Lecturer I —£2,469-£4,377

(All points on scales subject to £312 p.a. supplement.)

The Polytechnic is a direct grant institution with an independent Board of Governors. It opened in 1971 and now has a student population of some 6,100. It has extensive new purpose-built accommodation, including 750 residential places on a 114 acre campus overlooking the sea at Jordanstown, a pleasant and quiet residential area. There is a scheme of assistance with removal.

Further particulars and application forms, which must be returned by November 18 may be obtained by telephoning Whiteabbey (0231) 65131 extension 2243 or by writing to:

The Establishment Officer,
Ulster College, The Northern Ireland Polytechnic,
Jordanstown, Newtownabbey, Co. Antrim BT37 0QB

NEWCASTLE UPON TYNE POLYTECHNIC

Department of Chemistry

PRINCIPAL LECTURER

Required to take charge of the development of the teaching and research of one section of the Department which is mainly concerned with degree and certificate work in Chemistry and Medical Laboratory Science, and postgraduate work in Analytical Chemistry. Areas of particular growth are Analytical Biochemistry, Environmental Chemistry and Cell Biology. Preference will be given to candidates with an active research programme. Previous experience in higher education and in industry an advantage.

Burnham FE Principal Lecturer, £5,940 to £6,642/£7,578, plus £312 per annum salary supplement.

For further particulars and application forms, returnable by Friday, November 19, 1976, please send stamped addressed foolscap envelope to Staffing Officer, Newcastle upon Tyne Polytechnic, Ellison Building, Ellison Place, Newcastle upon Tyne NE1 8ST.

LONDON
MIDDLESEX POLYTECHNIC
TEACHING DEPARTMENT OF SENIOR LECTURER IN SCULPTURE

Applications are invited for the post of Temporary Full-time Lecturer II/Senior Lecturer in Sculpture for the spring and summer terms of the current academic year, the appointment to terminate at August 31, 1977.

Ref: AOA/90/B

Applicants should have a professional reputation and teaching experience at undergraduate level. This is a large post, the successful candidate will be required to teach Fine Art courses and carried teaching and organisational responsibility for sculpture.

Salary scale: LII/SL: £3,876 to £6,174 per annum plus £312 per annum supplement.

Write for full details and an application form, quoting first-class to: Appointments Officer, Middlesex Polytechnic (Ref. AOA/B), Bounds Green Road, London, N11 8NG, to whom completed forms must be returned by November 10.

THE POLYTECHNIC HUDDERSFIELD
Department of Business Studies

LECTURER II/ SENIOR LECTURER LAW

Applications should have a professional reputation and teaching experience at undergraduate level, preferably at postgraduate level. This is a large post, the successful candidate will be required to teach Fine Art courses and carried teaching and organisational responsibility for sculpture.

Salary scale: LII/SL: £3,876 to £6,174 per annum plus £312 per annum supplement.

Write for full details and an application form, quoting first-class to: Appointments Officer, Middlesex Polytechnic (Ref. AOA/B), Bounds Green Road, London, N11 8NG, to whom completed forms must be returned by November 10.

Announcements

COMMUNE

Group of people in but countryside 3 north of London to set up a community and conference centre seeks to meet other people who share interests, wanting to live in a more social and environmental basis, alternative technology, community involvement, women's lib and alternative education, use of arts, pottery or teachers. Capital or earning power required. Write box 7463, THE TIMES HIGHER EDUCATION SUPPLEMENT, Bond Street House, 14 Clifford Street, London, W1X 1RG.

MARY HENNIKER HEATON FUND

Applications for grants under the above fund should reach James Dowling, Trustee of the fund, at The Ross Bursford College of Speech and Drama, Lamorbey Park, Sidcup, Kent, by November 20, 1976.

REMINDER

Advertisements should reach The Times Higher Education Supplement by the Friday prior to publication for classified display advertisements and by 10.30 a.m. (latest) on Monday prior to publication for lineage and semi-display.

Polytechnics continued

LOTHIAN REGIONAL COUNCIL
NAPIER COLLEGE OF COMMERCE AND TECHNOLOGY

LECTURER (A) DEPARTMENT OF PHOTOGRAPHY

Salary on scale £3,528 to £6,324 (bar) to £6,807.

Required to be mainly responsible for teaching Photographic Theory and Practice to students on the three-year full-time Diploma course.

Applicants should possess a degree or equivalent professional qualification and have experience in one or more of the areas of advertising, commercial or industrial photography.

LECTURER (A) IN MARKETING DEPARTMENT OF MANAGEMENT

Salary on scale £3,528 to £6,324 (bar) to £6,807.

Required to lecture in a wide range of courses up to and including Post Graduate Diploma level on aspects of Marketing and be able to offer a specialism within the subject area.

Applicants should possess an honours degree and preferably hold a formal qualification in the field of marketing together with industrial research or teaching experience.

Further particulars and application forms from the Assistant Principal (Staff), Napier College of Commerce and Technology, Colinton Road, Edinburgh, EH10 5DT.

Colleges of Education

BIRMINGHAM
WESTHILL COLLEGE OF EDUCATION
Selly Oak
Principal: Alan H. Stanford, M.Ed., F.R.S.A.

LECTURER/SENIOR LECTURER IN EDUCATION (Special Education)

Applications are invited for appointment as Lecturer/Senior Lecturer in Education with special reference to the education of severely mentally handicapped children. The successful candidate will be a member of a team who have responsibility for the initial training courses i.e. both certificate and B.Ed. with a new Main Subject course in Mental Subnormality in B.Ed., a full-time advanced Diploma course for qualified teachers, and in-service courses. Candidates should have good academic qualifications in the appropriate field of special education or psychology and experience of severely mentally handicapped children. It is hoped to make an appointment with effect from 1st January, 1977, or as soon as possible thereafter.

Application should be made as soon as possible to the Principal from whom further information may be obtained. Salary will be in accordance with the Burnham F.E. Scales.

Colleges of Education

BRADFORD COLLEGE

Applications are invited for the post of

HEAD OF STUDENT SERVICES

which has become vacant on the retirement of the previous holder. The salary for this post will be in accordance with the Burnham (Technical) Conditions of Service, Head of Department, Grade IV.

£6,756 – £7,632

plus the supplement of £312 per annum

Application forms and further particulars are available from:

Staking Officer, Bradford College
Great Horton Road, Bradford BD7 1AY

and the completed forms should be returned to him by Friday, November 12, 1976.

Administration

TECHNICIAN EDUCATION COUNCIL

Appointment of

External Moderators

The Council invites applications for a number of new appointments as full-time or part-time external moderators. The moderators will play a key role in establishing and maintaining the standards of the Council's awards by monitoring the operation of TEC programmes and assessment arrangements. Initially there will be two full-time and about twenty part-time posts.

FULL-TIME POSTS

(available from 1st April, 1977)

These may be filled by secondment from an existing post or by appointment to the Council's service. One moderator will be based in the North West of England and applicants should have current recent experience relevant to Sectors [illegible] (Business Studies) and [illegible] (Science-based subjects). Applicants should have suitable experience relevant to Sector B (Construction and related subjects).

Salaries will be in the range £6,500-£8,500 p.a. and starting salary will depend on previous experience.

PART-TIME POSTS

The Council aims to fill these posts as soon as possible and to establish a register of people, willing to act as part-time moderators so that further appointments can be made as TEC's work develops. Applicants can be from either teaching or industry but should have current or recent experience relevant to the work of Sectors A, B or C (Science-based subjects).

Further details of the full-time posts can be obtained by writing to the Chief Officer (ref EM) at 76 Portland Place, London W1N 4AA. There are no application forms for these posts.

Further details and application forms for the part-time posts can be obtained by writing to the above address. Closing date for applications: 8th November, 1976.

BBC
EDUCATION SECRETARY

The BBC invites applications for the post of Education Secretary. This post, based in London, involves educational responsibilities in a number of areas: first, to be Secretary to the School Broadcasting Council for the United Kingdom, an independent body set up by the BBC to guide it in its broadcasting provision for schools. (The Education Secretary is seconded by the BBC to be Secretary of this Council.) The Education Secretary, who is a member of the BBC Education Management team, is also responsible for the administration of the work of the BBC's Further Education Advisory Council which advises the BBC on opportunities for broadcasting in the developing field of Continuing Education; and the direction of various supporting services to Educational Broadcasting. The post requires good academic qualifications, wide experience of education and the educational system, marked administrative ability and demonstrable interest in the potential of educational broadcasting.

Salary in the range £8,400 to £10,800 per annum; starting point depends on the successful candidate's qualifications.

Write or telephone immediately for further details and application form (returnable by 15th November), quoting reference 76.G.888/THES, to Appointments Department, BBC, London W1A 1AA. Telephone 01-580 4468, extension 4619.

BRIGHTON POLYTECHNIC

ADMINISTRATIVE ASSISTANT

to maintain official record of all Courses. Typing essential.

Salary Clerical 1/2, £1,422-£3,087.

Further details and application forms, returnable by 15th November, from the Personnel Officer, Brighton Polytechnic, Mouleecoomb, Brighton BN2 4GJ. Tel. 67304.

Courses

LONDON
THE UNIVERSITY
GOLDSMITH'S COLLEGE
ONE-YEAR FULL-TIME COURSE FOR ART SPECIALISTS

This course is intended for art specialists in schools, colleges of education and further education. Applications are also welcomed from teachers in primary education who are working or interested in this area of study.

Emphasis is placed on students doing their own work. Projects offered will be personally motivated and arrangements can be made for students to carry out theoretical and practical studies in fine art, art history or art education, if this is what they require.

Applicants should, normally, have at least three years' experience.

Applications are also welcomed from experienced teachers not at present teaching who wish to take a refresher year of study. (Expected tuition fee £150.)

Applications to the Admissions Office as soon as possible.

UNIVERSITY OF LEICESTER
SCHOOL OF EDUCATION
MASTER OF EDUCATIONAL STUDIES

The University of Leicester School of Education invites applications from suitably qualified candidates for the MEd Studies. This degree has been designed to provide teachers and administrators with an opportunity to extend their professional education at an advanced level.

It is hoped to offer the course on both a full- and part-time basis (one year full-time, two years part-time). The course will begin in October 1977, and assessment will be by written examination and dissertation.

Students will study three of the following options:

English as a Foreign Language	Educational Assessment and Evaluation
English in the Curriculum	
Linguistics in Modern Language Teaching and Learning, I	Primary Education, I—Curriculum Studies in Primary and Middle Schools
Linguistics in Modern Language Teaching and Learning, II	Primary Education, II—Socialization in the Primary School.
The Humanities Curriculum	
Science Education, I	Moral Education
Science Education, II	Structure and Process in Further Education

Full details and application forms can be obtained from:

Secretary to MEd Studies Course
University of Leicester School of Education
21 University Road, Leicester LE1 7RA

Announcements

SHEFFIELD
THE UNIVERSITY

A sum of 300 million yen has been donated by the Japanese Government to the university and the annual income is available for disbursement by a committee established under the auspices of the University Grants Committee for this purpose in Japanese Studies in the university institutions of the United Kingdom.

Applications are invited from members of staff of university institutions in the United Kingdom for financial assistance in the field of Japanese Studies for research and teaching purposes.

Intending applicants should write to the Registrar and Secretary, The University, Sheffield S10 2TN, from whom further particulars and application forms may be obtained. Closing date: 8.XI.76.

Holidays and Accommodation

HOTEL LE MARRAKESH

Marrakesh, Morocco. 7 nights this Winter from £127 per person. Thomson A la Carte. 37 exclusive hotels from Gatwick.

Sun your travel agent or ring us on 01-937 4411/3011. Prices subject to availability and adjustment. ATOL 1228C.

HOTEL SKANES PALACE

Monastir, Tunisia. 10 nights from £139 per person. Thomson A la Carte. 37 exclusive hotels from Gatwick. Sun your travel agent or ring us on 01-937 4411/3011. Prices subject to availability and adjustment. ATOL 1228C.

Overseas

Revitalised economy - superb location!

Together with most other countries, Zambia has recently been affected by the worldwide economic recession. Now our economy is surging forward strongly again, revitalised partly by significant advances in the country's agricultural industry and rising copper prices on world markets. Come here on a 3-year contract and your skills will be welcomed – and broadened. You'll enjoy the warm, pleasant climate in this totally land-locked country, larger than France, Belgium, the Netherlands and Switzerland combined. You'll enjoy the scenery too; although mainly a broad plateau, Zambia also features spectacular mountains, a certain amount of dense forest, imposing rivers, navigable and extensive game reserves. Its many large cities and towns contain all the normal modern facilities and are linked by excellent roads and rail services.

Teachers

in English; Geography; Maths; Chemistry; Physics; Industrial Art; Agricultural Science; French.

Requirements:

Degree plus Post-Graduate Certificate, or Diploma, or recognised Teacher's Diploma – and at least 3 years' teaching experience.

Salaries:

for trained graduates:
up to K5388 (c.£3600). Supplement up to £486 (married), £2568 (single).

for trained non-graduates:
up to K4560 (c.£3050). Supplement up to £3122 (married), £1762 (single).

Responsibilities:

to adapt teaching methods in a practical way to the environment, which may be in a rural or urban area, and contribute energetically to activities outside the classroom.

Strong financial attractions

As well as the salary quoted, you will enjoy TAX-FREE supplements, a TAX-FREE terminal gratuity, low-cost accommodation, low taxation and free passages. Together, these add up to exceptional real earnings. Starting salaries relate to qualifications/experience, while gratuities total 25% of basic salary. Salary-related supplements are reviewed annually and paid by the British Government to designated British nationals (annual maximum is shown), while appointment grants, education allowances, car loans, medical aid assistance and free holiday visits for children educated in Britain are also provided for those receiving supplements. N.B. Sterling equivalents given are approximations only due to constant exchange rate fluctuations.

For further information please send full personal/professional details (without obligation and in total confidence), indicating which position interests you, to: Recruiting Officer (Room 11), Zambia High Commission, 7-11 Cavendish Place, London, W1.

ZAMBIA

FACULTY OF EDUCATION, *DOHA, QATAR*

Applications are invited for appointment to the position of

PROFESSOR OF ENGLISH

at the Faculty of Education, Doha, Qatar

to take up the appointment in September, 1977. Candidates must have a doctorate qualification in English Language or Literature, be native speakers of English and have considerable experience, not less than twelve years, some of it in British, Canadian or accredited American universities and some of it at professorial level. Experience of teacher training would be an advantage.

Salary on the scale of Qatar Riyals 7,800 per month plus increments of Rls. 200, to maximum Rls. 9,800, plus 25% for full-time commitment (£1 equals approximately Rls. 7).

Benefits: No income tax; free, furnished accommodation; free medical service; annual passage-paid leave; car allowance of Rls. 400 per month.

Applications should be sent with curriculum vitae to the Dean, Faculties of Education, P.O. Box 2713, Doha, Qatar, Arabian Gulf.

Overseas continued

RIVERINA COLLEGE OF ADVANCED EDUCATION
WAGGA WAGGA, NEW SOUTH WALES

The College invites applications for the following positions within the School of Business and Liberal Studies:

LECTURER IN INDUSTRIAL RELATIONS

The College proposes introducing a two year course in Industrial Relations at the Associate Diploma Level in 1977, and seeks a person to co-ordinate the introduction and implementation of the course. A knowledge of personnel management, organization theory, and organizational development would be an advantage.

ASSISTANT LECTURER/ LECTURER IN MANAGEMENT

The College is seeking a person to teach introductory subjects in management and/or organization theory, as well as one or more subjects in the following areas: Advanced Business Management, Advanced Management Systems, Organizational Development, Marketing, Personnel Management.

Applicants should have appropriate academic qualifications, together with related work and/or tertiary teaching experience.

Salary Ranges:
A. Lecturer Lecturer A$11,492-A$13,228.
Lecturer A$11,228-A$17,687.
(Under review.)

GENERAL:
Members of staff are eligible, subject to certain conditions, to contribute to an attractive superannuation scheme and to participate in a housing purchase plan. A contribution is made to travel and removal expenses or an assisted passage arranged as appropriate. Leave conditions are similar to those in comparable tertiary institutions.

Further information and application forms are available from the Agent-General for New South Wales, 66 The Strand, London, with whom applications close on 12th November, 1976.

Principal Senior Lecturer in Childhood Education

Applications are invited for the above post from candidates with outstanding qualifications and expertise in early childhood education. The successful candidate will be required to accept major responsibility for the academic and professional development of this area of education in the college and for a number of academic staff associated with this work.

Salary range: Principal Lecturer $A22,078-$A22,782; Senior Lecturer $A18,034-$A20,928.

Applicants should include in their curriculum vitae (a) academic qualifications in detail with dates, (b) relevant professional experience, (c) teaching/lecturing experience, (d) names and addresses of three referees well acquainted with the applicant's qualifications and/or professional work.

Further information may be obtained by contacting the Secretary, Armidale College of Advanced Education, Mossman Street, Armidale, NSW 2350, Australia. Applications close on Monday, 22nd November, 1976, and should be addressed to the Secretary.

UNITED WORLD COLLEGES

THE JOHOR UNITED WORLD CENTRE
Johore, Berhanu, Malaysia

Required for January, 1977, or earlier if available, a RESIDENT WARDEN.

For the post, the Board of Governors seek a person who is willing to offer formal qualifications or a relevant combination of secondary school subjects as well as experience and reasons evidence of ability to a range of students from 16 to 19 years of age and from a variety of backgrounds and cultures.

"Johore is a "jungle development", a new and open study centre for public cultural and social contact and exchange. It is a junior United World College in the Malaysian and the United World College of S.E. Asia situated beside Singapore, the country based on the Island of Singapore and on the south of Johore in West Malaysia and on the south of Johore in the island of Singapore. It faces the island of Singapore. It is in the main Singapore, some 40 miles from Singapore.

The appointment would be for two years, with the prospect of renewal. The salary would be in the range of $810.000 per annum, depending on age, length of service, various specialist experience, qualifications and other factors. Further details and particulars from:

Julian Nunn, United Colleges of Asia, Salisbury House, Westminster, Hillard Kingdom, or the Secretary, Johore, United World Centre, c/o U.W.C. United World College of S.E. Asia, P.O. Box 15, Singapore 6.

Applications (no forms) giving the fullest particulars, should be addressed to the Secretary, Johore United World College of S.E. Asia, Pasir Panjang, P.O. Box 15, Singapore 6.

THE BRITISH COUNCIL

Invites applications for the following posts:

ADVISER IN-SERVICE EDUCATION OF TEACHERS OF ENGLISH (Afghanistan)
ADVISER IN PRE-SERVICE EDUCATION OF TEACHERS OF ENGLISH (Afghanistan)

Ministry of Education Curriculum Textbooks Project, Kabul.

Candidates must have postgraduate linguistics qualification and approximately 5yr. experience. Salary £6,001 to £6,848 per annum.

Benefits: overseas and children's allowances; free furnished accommodation.

Two-year contracts.

Return fare are provided. Local contracts are guaranteed by the British Council.

Please write, briefly stating qualifications and length of appropriate experience, quoting reference number 76 AS 12-16 and title of post for further details and an application form to: The British Council (Appointments), 65 Davies Street, London W1Y 2AA.

Appointments Wanted

LECTURER

is MODERN CHINESE STUDIES several years teaching in China, seeks post teaching/research position. Box 0060 THES, The Times, W1A 1BX.

GRADUATE LECTURER in sociology, film, editor/photographer with wide experience, seeks job in college/university; media research/education/development. Write box 0061 THES, The Times W1A 1BX.

A job you'll enjoy

There's more to the job of Inspector of Taxes than fits the eye: an intellectual challenge, for instance, that so many graduates find lacking in the work they take up, when compared to their former life as students.

As an Inspector in charge of a Tax District you are responsible for the tax affairs of individuals and companies large and small in that area. You will deal personally with the more important cases, which will demand all your intellectual skills in reaching a fair and proper decision. In negotiation with a taxpayer's professional advisers you will need to exercise in full the intensive training in law and accountancy you receive.

During your career you could take charge of the tax affairs of an entire district, enjoying wide powers of discretion. You may also spend periods on more specialised aspects of taxation and acquire an enviable professional expertise – in itself a valuable career asset.

Qualifications: Under 32 and a degree with honours – at least second class honours ability is looked for. Final Year Student s may apply.

If you start at 21, your salary should be over £4,500 at 23 and over £5,900 at 27. By your late 30's you should be earning over £9,000. By 40 you could be in a post with the Tax Inspectorate or in general management in the Civil Service, taking you to £11,000. There are vacancies all over the country. Salaries up to £465 higher in London.

To find out more, and for an invitation to visit a Tax Inspector, write to Civil Service Commission, Alencon Link, Basingstoke, Hants, RG21 1JB. Please quote: reference A/820/L/

HONOURS GRADUATES – a career that appeals to reason

HM Inspectors of Schools

ART EDUCATION

Applications are invited from men and women, preferably aged between 35 and 45, for appointment as HM Inspector with a major commitment in Art Education.

HM Inspectorate provides professional advice to the Department of Education and Science. All HMIs ordinarily carry a general assignment as well as a specialist one. They inspect and advise schools, consult with LEAs and organise and take part in short courses for teachers and others in the educational service.

Candidates must have an appropriate qualification and have had a successful career in some aspect of art education. In addition, they must have, or be prepared to acquire, an understanding of other art forms.

Starting salary within the range £8,625 to £9,415 (higher in London). Supplement under the Government's pay policy payable up to £8,500. Higher posts are normally filled by promotion.

Application forms and further information may be obtained from Miss B. C. Taylor, Department of Education and Science, Room 10/F, Elizabeth House, 38 York Road, London SE1 7PH, telephone 01-928 9222, extension 2237. Please quote 7/75E. Closing date 10 November.

Department of Education and Science

LONDON GRADUATE SCHOOL OF BUSINESS STUDIES

FINANCE AND ACCOUNTING ADMINISTRATION

Applications are invited for the post of

Assistant Accountant

for finance and accounting control systems at the London Graduate School of Business Studies.

Candidates, preferably with university administrative experience, should hold formal accountancy qualifications, or be at the final stage of such qualification, and, as the Assistant Accountant responsible to the Finance Officer of the Institution, will be entirely responsible for a complete section of the School's accountancy to final account and audit, together with responsibility for pension schemes at the School (USS/FSSU).

The commencing salary will be within the scale £3,216 to £5,052 per annum.

Appointments can be arranged to discuss the post in greater depth by telephoning or writing to Mr. A. S. Cook, the Finance Officer, at:

THE LONDON BUSINESS SCHOOL, Sussex Place, Regent's Park, NW1, 4SA.
Telephone no.: 01-262 5050.

EDITORIAL OFFICER

Required January 1, 1977, or as soon as possible, an Editorial Officer for the Society for Education in Film and Television. The post would primarily involve the editing of Screen, the society's quarterly journal concerned with film theory. The Editorial Officer should have a proven interest in a wide area of screen education. The work would involve an equivalent of three days a week.

Further details from Richard Dyer, Screen, 29 Old Compton Street, London W1V 5PL.

LONDON
RESEARCH ASSISTANT

Science Museum requires a RESEARCH ASSISTANT for up to 18 months for cataloguing work on the Pictorial Collection in the museum library. Duties will include assembling prints, drawings, paintings and photographs at present in curatorial departments, assisting with the development of cataloguing methods and documentation systems and answering enquiries.

Candidates should have a degree in the history of art, natural science or equivalent qualification and considerable experience in the relevant field. Knowledge of data processing techniques or of the Dewey classification would be an advantage. Ability to write clear and concise English is essential.

Starting salary £3,140 to £3,537, depending on age, qualifications and experience plus London weighting of £465 per annum and supplement of £311.20 per annum. 41-hour, five-day week.

Application form and further particulars from the Establishment Officer, Science Museum, Exhibition Road, London SW7 2DD (tel.: 589 3456, ext. 307/309).

Closing date: November 15, 1976.

Colleges of Higher Education

HEREFORD AND WORCESTER
(County of)

WORCESTER COLLEGE OF HIGHER EDUCATION, Henwick Grove, Worcester WR2 6AJ.

Applications are invited from GRADUATES in Sociology for a Lecturership commencing as soon as possible after January 1 to August 31, 1977.

The salary will be within the Burnham F.E. Scale for Lecturers, Grade II (range £5,802 to £8,808) with placing according to qualifications and experience.

Further particulars may be obtained from the Principal, to whom applications should be submitted by Wednesday, November 3. There are no application forms and applicants should submit a tabulated statement giving date of birth, education, qualifications, experience and the names of two persons to whom references may be made.

Co-operative College

CO OPERATIVE UNION LIMITED EDUCATION DEPARTMENT

PRINCIPAL

and

CHIEF EDUCATION OFFICER

Applicants are invited for the post of Principal of the Cooperative College/Chief Education Officer of the Cooperative Union whose services in Cooperative staff and member education are operated from Stanford Hall near Loughborough.

It is envisaged that the successful applicant would work alongside the present Officer until his retirement in the summer of 1977.

An attractive salary will be paid and residential accommodation is available.

Full particulars can be obtained from the General Secretary, Cooperative Union Ltd, Holyoake House, Hanover St, Manchester M60 0AS, to whom applications should be sent by not later than Tuesday, November 30, 1976.

Classified Advertisements

To advertise in *The THES* phone Charlotte Coulson 01-837 1234, Extn 375

THE TIMES Higher Education SUPPLEMENT

New Printing House Square, P.O. Box 7, Gray's Inn Road, London WC1X 8EZ.

LIBYAN ARAB REPUBLIC

TECHNICAL INSTRUCTORS

LIBYAN INSTITUTE OF PETROLEUM (LIP)

LIP Tripoli is expanding its training effort and is seeking Instructors/Engineers to teach Libyan Apprentices, technical skills and workshop technology to prepare them as craftsmen and operators in the Oil Industry. Instructors will also be responsible for developing and revising courses and course manuals and identifying training requirements in connexion with the career development of trainees.

Applicants must have at least Ordinary National or City and Guilds Certificates and no less than five years' practical experience. A teaching qualification or craft training experience is essential. Instructors/Engineers are required in the following areas:—

1. Instrumentation—including pneumatic technology and electronic automation systems.
2. Electricity — including generators, transmission and controls.
3. Diesel/Petrol Engines—including turbine pumping units and compressors.
4. Computer programmer and system analyst.
5. Industrial and oil field safety instructor.

Attractive salaries, according to experience and qualifications, 45 days' annual leave with fares paid to the UK and other benefits will be offered.

Please write immediately giving details of personal vitae, qualifications and experience to:—

The Director
LIBYAN INSTITUTE OF PETROLEUM
care of Cultural Attache
Embassy of the Libyan Arab Republic
58 Prince's Gate, London SW7

Personal interviews will be held in London between November 1 and November 12.